

## ICC Ruling Grants Train Load Rates on Bulk Shipments

Decision May Affect  
Movement of Potash,  
Phosphatic Rock

WASHINGTON—Plant food industry representatives expressed keen interest in last week's ruling by the Interstate Commerce Commission which granted train load rates for bulk commodities when shipped by a single shipper to a single consignee. This ruling by a three-man group of commissioners was divided in its favorable decision which involved a movement of coal originating in the states of West Virginia and Kentucky for barge transshipment to a single consignee in Chicago. The action was opposed by representatives of eastern carriers who complained that the ruling would disrupt the established coal freight rate pattern. In approving this train load rate application, the ICC appears to be participating the new policy recom-

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## Anhydrous Ammonia Capacity to Top Four Million Tons

WASHINGTON — About 527,000 tons of anhydrous ammonia will be added to the U.S. capacity by the end of this year, bringing total rated capacity to more than four million tons a year, the Department of Commerce says in a 1955 review and report on prospects of the chemical and fertilizer products industries. The report also states that except for lead arsenate and benzene hexachloride, 1955 output and use of pesticides will exceed by far the levels of 1954. The value of pesticide exports probably top \$80 million this year.

## Calspray to Build \$1½ Million Captan Plant in France

RICHMOND, CAL. — Nobert B. Van Buren, manager of eastern hemisphere operations for California Spray-Chemical Corp. and president of California Spray-Chemical Cie., Francaise, has announced that successful negotiations have been completed with French authorities who have approved a \$1,500,000 investment by Calspray to build a captan plant in France.

The production of the French plant, which is expected to be "on stream" in the fall of 1956, will be sufficiently large to take care of the French market as well as of the "soft currency" markets throughout the Eastern Hemisphere, Mr. Van Buren said.

## Agreement Reached For Consolidated, Stauffer Merger

NEW YORK—Agreement in principle has been reached on a plan of merger of Consolidated Chemical Industries, Inc., into Stauffer Chemical Co., according to a recent joint statement by the two firms.

The plan was approved unanimously by the boards of directors of both companies at special meetings held Sept. 19, and it will be submitted to the stockholders of the two firms.

Speaking for their respective boards of directors, Christian de Guigne, chairman of the board of Stauffer, and George L. Bond, president of Consolidated, said that the plan provides for an exchange of 3¼ shares of Stauffer common stock for each share of Consolidated Class A participating preference stock, excluding the shares of Consolidated owned by Stauffer.

If the merger is completed, 698,-  
(Continued on page 21)

# Pesticide Tolerance Fees Upped by FDA; Aramite Ruling Due

WASHINGTON—Food & Drug Administration says that its fees for applications for pesticidal tolerances are not paying their way. Consequently, FDA has instituted higher filing fees for those purposes. In major instances, the fees have been doubled, but according to FDA of-

ficials the increase, while seemingly large on the surface, is not likely to bring objections by industries using these services of FDA.

For many months, all government agencies have been operating on an over-all policy established by the budget bureau which requires that in use of government services of all kinds, applicants are to be charged fees which cover actual costs to the government. Recently it may be recalled that FDA reduced certain fees involved in handling applications on tolerances for pesticidal materials.

The major changes announced by FDA this week involve an increase in fees for filing original tolerance level determinations for pesticidal chemicals from \$500 to \$1,000 on use applications involving 9 crops with the same tolerance level for each crop.

The next group which will be charged the higher fee is that wherein the applicant requests tolerance approvals for 14 crops with individual and separate tolerance for each crop. In that category the fee is jumped from \$750 to \$1,500.

In discussing the increase, FDA officials note that little if any objection is to be expected from the chemical companies. Pharmacological work comes high, they point out. They cite the instance of one company which has engaged a pharmacological laboratory to conduct a two-year study on a product it plans to market. The fee charged by the private laboratory is said to be \$300,000.

## India Firm Asks for Bids on \$6 Million Expansion Program

NEW DELHI—Fertilizers and Chemicals, Ltd., of Travancore, India, is calling for tenders on a global basis for the supply of fertilizer manufacturing equipment. The company's projected program of expansion, which is backed by the Indian government, is expected to cost the equivalent of \$6 million.

The company manufactures ammonium sulfate, sulfuric acid and superphosphate.

The tender is divided into nine sections. The first requirement is for water electrolytic cells for the production of hydrogen for ammonia synthesis for three million cubic feet of hydrogen a day. The second section involves a 110 k.v. sub-station and rectifiers for the production of

(Continued on page 21)

## Aramite Tolerance Expected by Sept. 30

WASHINGTON—The information reaching Croplife here indicates that before Sept. 30, Food & Drug Administration will grant its approval of a unanimous technical committee finding in favor of granting a tolerance for aramite, a pesticidal chemical.

This was learned after the publication of an extension date of the final ruling on this product from Sept. 13 until Sept. 30, 1955.

The FDA received the unanimous finding of the advisory committee on Aug. 31, but subsequent intervention of Labor Day holiday and internal processing problems have caused the delay in official FDA action.

## Tolerance Levels on Two Products Amended

WASHINGTON — Tolerance levels previously established by Food & Drug Administration for residues of pesticidal chemicals, dichlorophenyl and dimethyl urea, have been amended by that agency in an action taken this week.

The amended action provides a residual tolerance of 1.0 part per million for residues of 3-(3-4 dichlorophenyl) and 1.1 dimethyl urea in applications in or on the following raw agricultural commodities: cottonseed, pineapples and sugarcane.

## Swift & Co. Expands South Carolina Facilities

COLUMBIA, S.C.—Swift & Co. has begun construction of a 10,000 sq. ft. addition to its group of plant food and oil mill production facilities here. The addition will provide for bag goods storage at the fertilizer plant.

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## Full Fertilization Could Add Billion Bushels to Midwest Corn Crop, Anhydrous Meeting Told

URBANA, ILL.—Corn production in 12 midwestern states could be a billion bushels more than in 1950 if farmers used a complete fertilizer program.

That's the report Dr. E. R. Swanson, University of Illinois farm economist, gave at the recent Corn Belt Agricultural Ammonia Conference on the Champaign-Urbana campus of the University of Illinois.

Dr. Swanson said that a "full fertilizer program" would raise total yields 50% over 1950.

Nearly 700 persons registered for the conference. About the same number witnessed the field appli-

cator demonstrations on plots of bluegrass and wheat stubble on a farm near the university. Applicator manufacturers from across the U.S. demonstrated their equipment.

Leading nitrogen experts from Michigan, Indiana, Wisconsin, New York and Illinois spoke on the program. Participants included: Dr. Roger Bray, Dr. Sigurd Melsted, Dr. Touby Kurtz, Dr. E. H. Tyner and Dr. Swanson from the University of Illinois, Dr. Lloyd Frederick of Purdue University, Dr. Michael Peech of Cornell University, and Prof. C. M.



## Dow Expands Farm Chemical Sales Activities

MIDLAND, MICH. — Three new groups have been formed to strengthen and expand the Dow Chemical Co.'s activities in marketing its agricultural chemical products, it is announced by W. W. Allen, manager of agricultural chemicals sales.

A farm products group will coordinate the work of product managers responsible for marketing herbicides, insecticides, fungicides, and soil and grain fumigants for use on the farm. It is supervised by Glenn Gullikson, head of the merchandising section for the past two years.

An industrial products section will coordinate the activities of product managers handling the sale of Dow materials in the utility, highway, railroad, industrial property and other fields. Such products include herbicides, veterinary chemicals, food supplements, space and grain fumigants and fertilizers. Supervisor is Theodore L. Bendall, for the past eight years head of agricultural chemicals sales for the company's New York, Boston and Philadelphia offices.

The third group will handle long range sales planning; development of markets for new products and new uses for established materials; educational activities for the sales staff; and contacts with extension service personnel and vocational agriculture instructors as well as farmers. Hilard L. Smith, head of herbicide sales for the past seven years, is supervisor.

Howard W. Sheldon, with the merchandising group the past year, has moved up as supervisor of that section.

## Austin Richins Named To New Sales Post With J. R. Simplot

POCATELLO, IDAHO — Austin Richins, Pocatello, has been promoted to the position of assistant sales manager of J. R. Simplot Co., fertilizer division, according to an announcement made here by Ben D. McCollum, sales manager.

Mr. Richins has been employed by J. R. Simplot Co. since 1946 when he began his employment at the Pocatello plant of the company's fertilizer division. Three years of varied experience followed, including work in the sales department. He then worked at the Simplot Soilbuilders unit at Twin Falls. Mr. Richins returned to the Pocatello plant in 1950 as purchasing agent and personnel manager of the fertilizer division.

Mr. Richins, 28, was born at Declo, Idaho, and attended local schools there. He entered the armed forces in 1944 and was discharged in 1946 just prior to accepting employment with the Simplot Co.

## Byron P. Webster, Chipman Vice President, Resigns

BOUND BROOK, N.J.—Byron P. Webster, vice president of Chipman Chemical Co., has resigned his position due to poor health, the company has announced. Mr. Webster has been with the company for 34 years, and is well known throughout the trade. He will continue his association with the company as a consultant.

### AERIAL SPRAYING

WASHINGTON—During the past eight years more than five million acres of forest land have been successfully treated by aerial spraying, and control costs have been reduced from \$3 to about \$1 an acre, according to the U.S. Department of Agriculture.



Dr. G. L. Bridger

## G. L. Bridger to Head Agricultural Research For Davison Chemical

BALTIMORE—Dr. G. L. Bridger, consultant on fertilizer production and head of the Department of Chemical and Mining Engineering of Iowa State College, has joined the Davison Chemical Co. Division of W. R. Grace & Co. as director of agricultural research.

Vincent Sauchelli, agricultural authority of long association with Davison, has been named chief agronomist of the company.

Dr. Bridger received degrees in chemical engineering and physical chemistry from Rice Institute, and was awarded his Ph.D. in chemical engineering from Iowa State. After early teaching experience at Iowa State and a period as junior chemist for Shell Petroleum Corp., Dr. Bridger joined the Tennessee Valley Authority in 1939 as project engineer. He was chief of the TVA Process Development Division from 1944 to 1947, when he was reappointed to Iowa State, as professor and department head.

Among important consulting work which Dr. Bridger has done is the development of a phosphate deposit in Southern Rhodesia for Anchor Holdings, Ltd., of Capetown, and a study, on a Smith-Mundt appointment, of the fertilizer industry of New Zealand for the U.S. Department of State and the New Zealand Department of Agriculture.

Dr. Bridger holds several patents on fertilizer production processes, and is the author of many technical papers. He is vice chairman of the American Chemical Society Division of Fertilizer and Soil Chemistry, and vice chairman of the Chemical Engineering Division, American Society for Engineering Education.

## Pittsburgh Coke Forms Chemical Procurement Department

PITTSBURGH—Pittsburgh Coke & Chemical Co. has announced the formation of a chemical procurement department to serve the requirements of the company's chemical divisions.

W. K. Menke, vice president, stated that continued growth of the company's chemical business has created the need for specialized chemical purchasing personnel and techniques.

J. W. McNeil has been appointed manager of chemical procurement. Mr. McNeil previously served with E. I. du Pont, and since 1948 had been purchasing agent of the Marietta, Ohio, plant of B. F. Goodrich Co.

H. A. Carpenter has been appointed assistant manager of chemical procurement. Mr. Carpenter joined the company in 1948.

## Program Announced For Midwest Soil Committee Meeting

CHICAGO—Plans will be presented for expanded educational activities to help promote greater fertilizer use at the Middle West Soil Improvement Committee's annual meeting Oct. 27, at the Sherman Hotel in Chicago.

More than 200 representatives of MWSIC's active and associate member companies are expected to attend, plus a number of specially invited guests.

W. M. Newman of the Price Chemical Co., Louisville, Ky., MWSIC acting president, will open the business meeting at 9:30 a.m. Mr. Newman became head of the organization last June, when Harold S. Vorhes resigned to establish his own fertilizer company at Charles City, Iowa.

Members will review reports by R. G. Fitzgerald of the Smith-Douglass Co., Inc., Streator, Ill., MWSIC treasurer, and H. E. Wood of the Farmers Fertilizer Co., Columbus, Ohio, chairman of the audit committee.

Z. H. Beers, executive secretary, will summarize results of the committee's 1954-55 educational program in various media, including: (1) newspaper publicity in 1,750 dailies and weeklies regularly receiving illustrated and unillustrated stories; radio scripts released to 275 Corn Belt stations, plus live and transcribed programs; (2) articles in farm magazines reaching national, regional and state readership; (3) distribution of MWSIC color folders and film strips to vocational agriculture teachers in 2,000 schools in 13 states.

Mr. Beers will also describe results of the committee's grant-in-aid program sponsoring fertilizer research at midwestern colleges and experiment stations. He will likewise report on field trips and contacts with colleges and stations.

The agenda will also include reports of the membership committee, headed by R. E. Bennett of Farm Fertilizers, Inc., Omaha, Neb.; the literature and film strip committee of which D. A. Williams, Minnesota Farm Bureau Service Co., St. Paul, Minn., is chairman; and the projects committee headed by K. W. Wagenseiler, Swift & Co., Hammond, Ind.

Before adjournment, members will approve a budget for 1955-56 and elect directors for the coming year.

Following the close of the business meeting, members will have opportunity to preview work now in progress on three new MWSIC film strips on the subjects of corn, legumes and the establishment of legumes (band seeding and culti-packer seeding).

## William P. Niedermeyer Joins Fertilizer Construction Co.

GREEN BAY, WIS.—William P. Niedermeyer has become affiliated with the engineering staff of the Fertilizer Construction Co., Inc., here, according to James E. Madigan, president.

After leaving the navy in 1946 Mr. Niedermeyer attended Marquette University. After receiving his degree in mechanical engineering he joined the A-C Spark Plug Division of General Motors as field service engineer on electromechanical computers. He later was a sales engineer in the export division of Nordberg Manufacturing Co.

Mr. Niedermeyer will supervise the installation of granulation equipment at the Whitewater plant of Wisconsin Farmco Service Cooperative.



Kenneth A. Keith

## Kenneth A. Keith Named to Spencer Market Research Post

KANSAS CITY—Spencer Chemical Co. has announced the appointment of Kenneth A. Keith to the position of manager of agricultural chemical market research, in a move for greater specialization in the department.

Mr. Keith has been with Spencer eight years, the last four as Wisconsin sales representative. Earlier he served as assistant to the agricultural chemicals sales manager and as market analyst.

Born at Canton, S.D., he was active at an early age in agricultural training. In addition to receiving state farmer award in 1932, he won a trip to Kansas City in 1933 to the National F.F.A. Convention, and was graduated from high school in 1934 with the school's athletic scholarship award.

A student at South Dakota State College, he was graduated with a B.S. degree in agricultural economics. After wartime duty as an officer in army communications, he entered graduate work and teaching at Iowa State College in 1946. Mr. Keith is married and they have two children. The family will make its home in Kansas City.

## Robert S. McConnell, L. L. Jaquier in New Phillips Posts

BARTLESVILLE, OKLA. — L. L. Jaquier, Jr., and Robert S. McConnell have been named to position in Phillips Petroleum Co.'s fertilizer sales division offices at Bartlesville, Okla., where the company's headquarters are located.

Mr. Jaquier, formerly assistant manager of Phillips Kansas City sales division, has been appointed manager of material sales for the fertilizer sales division.

He started with Phillips as a chemist in the Kansas City, Kansas, refinery in 1943 following graduation from the University of Kansas with a degree in chemical engineering. He worked as a sales engineer in Phillips product development section from 1946 until 1949 when he was promoted to district manager of fertilizer sales at Kansas City. He was named assistant division manager there in 1953.

Mr. McConnell was assistant manager of Phillips Wichita sales division until his new appointment as coordinator of fertilizer sales. He came to Phillips in 1946 as a sales engineer in the product development section, then became an agricultural ammonia sales representative in 1948. He was named assistant division manager at Wichita in 1953. He is a graduate of Luther College at Decorah, Iowa.

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## California Fertilizer Assn. Plans Meeting In San Francisco

SAN MARINO, CAL.—The California Fertilizer Assn. has announced that its thirty-second annual convention will be held at the Hotel Mark Hopkins, San Francisco, Nov. 6-8. About 475 persons are expected to attend from all parts of the U.S. and from Canada.

William G. Hewitt, Berkeley, chairman of the convention program committee, reports a very brief, but outstanding program for the business session. Four directors and officers for 1956 will be elected, and the annual budget will be presented for approval.

The ladies will be given special treatment, including a luncheon and entertainment at the Top-of-the-Mark, golf, bowling and bridge tournaments are scheduled with prizes for winners.

Three cocktail hours and banquets are scheduled. Two acts of Hollywood entertainment and a good dance band featured on the evening of Nov. 8, as part of the annual banquet. The association suggests that those planning to attend arrange for accommodations without delay.

## Pacific Northwest Regional Fertilizer Conference Planned

YAKIMA, WASH.—With registration beginning the afternoon previous, the seventh regional Fertilizer Conference of the Pacific Northwest will start June 28 in the Chinook Hotel, Yakima, Wash.

The forenoon will be largely devoted to nitrogen fertilizers, synthetic, behavior in the soil in different forms, and results of nitrogen fertility studies in the Pacific Northwest. The afternoon program will cover placement of fertilizers, where it pays and how it is done.

The second forenoon will be devoted to field trips and inspection of an exhibit of the latest machinery for placement and application of fertilizers. In the afternoon, there will be a formal program of general papers covering the broad field of soil fertility in the Northwest.

The third day is traditionally a technical meeting on soil and tissue testing and interpretation.

## Harry S. Ferguson Named to MCA Board

WASHINGTON — Harry S. Ferguson, vice president, Allied Chemical & Dye Corp., has been elected to the board of directors of the Manufacturing Chemists Assn., it was announced here by Gen. John Hull, S.A. (Ret.), MCA president.

Mr. Ferguson has been active in MCA affairs for a number of years. From 1953 to 1955 he served as chairman of the association's public relations advisory committee. A graduate of Amherst College (1923) and the Columbia University School of Law (1926), he joined Allied Chemical in 1933.

In 1934 he became head of that company's legal division and was elected a vice president of the company in 1951. In 1953 he became a member of the firm's executive committee.

## Frank H. Jeter, North Carolina Editor, Dies

RALEIGH, N.C. — Dr. Frank H. Jeter, 64, North Carolina extension editor, died Sept. 15. He had been extension editor since 1914, with the exception of two years when he was an editor with the Southern Fertilizer Assn.

## New Control Office Set Up in New Mexico

STATE COLLEGE, N.M. — Fertilizer and insect control work is getting new leadership in New Mexico.

The regents of New Mexico A&M College, responsible for the administration of all laws affecting agricultural products in the state, have created a new office of regulatory services. Dr. Roger B. Corbett, A&M president, named Dallas Rierson state director of this office.

Mr. Rierson will be in charge of maintaining control measures against the khapra beetle and will supervise the administration of state laws concerning the sale of feeds and fertilizers, seed, dairy products, honey, eggs and fruits, and vegetables, as well as laws affecting cotton ginning, plant quarantine, nursery inspection, and the work of the state chemist's office at State College.

Mr. Rierson will be assisted by Russell Ludwick, deputy in charge

of feeds, fertilizers and economic poisons control. Mr. Ludwick will also continue to carry out his present duties as control officer.

Dr. R. C. Dobson, who was formerly in charge of the khapra beetle control program, has been transferred to the State Agricultural Experiment Station where he will be assistant entomologist.

Before assuming his new post, Mr. Rierson was the Agricultural Extension Service's county agent leader. A graduate of A&M College here in 1941, he was a county agent in various parts of the state from 1943 to 1953.

## RECORD COTTON YIELD

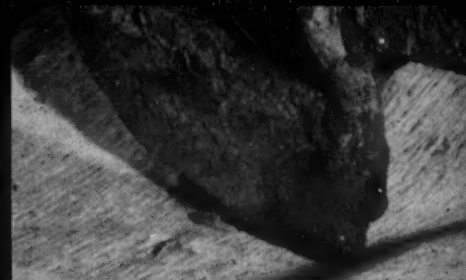
AUBURN, ALA. — If expectations of the State Crop Reporting Service prove true, Alabama growers will harvest 820,000 bales of cotton from an estimated 993,000 acres this fall—an average yield of about 396 lb. lint per acre. This predicted average exceeds the record 1948 average of 353 lb. per acre by 43 lb.



**CORN PLANTER ATTACHMENT**—Liquid fertilizer streams from modified corn planter shoe beneath corn as it is planted. Clod shield protects the tube feeding liquid. (Shoe is above ground for demonstration purposes.)



**CULTIVATOR ATTACHMENT**—With a rig like this, it's easy for a farmer to fertilize as he cultivates. Use of complete liquid fertilizer eliminates need for carrying heavy bags.



**CLOSE-UP**—The special attachment at bottom of shoe on corn planter delivers fertilizer into soil; permits application of liquid simultaneously with planting.

## New applicator equipment means longer selling season for liquid fertilizer formulators

New applying equipment is doing much to level out historic spring-fall peaks in fertilizer application. Ease of liquid application encourages fertilizing almost any month of the year. Pictured above are two examples of equipment progress: (1) A new modification to permit application at time corn is planted, and (2) A cultivator attachment which permits side dressing of crops with liquid fertilizer.

**AN ASSURED SUPPLY.** Your supply of phosphatic fertilizer solution is assured by Monsanto, world's largest producer of elemental phosphorus. Formulators: Send today for booklet "Formulating Complete Liquid Fertilizers." Write MONSANTO CHEMICAL COMPANY, Inorganic Chemicals Division, 710 North Twelfth Boulevard, St. Louis 1, Missouri.

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## Collecting Pest Data

## USDA Describes Methods of Gathering Information About Insect Populations, Activity

WASHINGTON — Appraising this season's insect numbers and forecasting next year's is becoming an increasingly exact science as pest survey methods are standardized, U.S. Department of Agriculture entomologists declare. Many of the methods are given in a cooperative report by the Agricultural Research Service outlining the wide variety of methods used each year in many states to survey more than 50 economically important insect pests.

Field entomologists obtain actual insect counts or damage estimates in sample areas by visual inspection, insect trapping, sweeping plants with nets, and soil or water sampling. They sometimes use unusual methods such as jarring tree limbs with a rubber-covered mallet to make plum curculio beetles fall on a stretched sheet.

Insect counts are compared with established standards to classify infestation from "very light" or "non-economic" to "very heavy" or "very severe." Counts of hibernating or overwintering insect populations are used to estimate expected numbers during a coming crop season.

Farmers, pest-control agencies and operators, and insecticide material and equipment manufacturers use survey results to plan spraying and dusting programs.

Surveys are essential to detect spread of insects into new areas, as demonstrated by recent survey findings of yellow clover aphids in previously uninfested areas of the West, of a few citrus blackflies in Texas, and of the gypsy moth southwest of the 80-year-old New England infestation.

Sometimes damage is easier to appraise than insect numbers. Feeding of thrips turns cotton plants brownish or silvery. Leaves chewed by white-fringed beetles are more easily spotted than the ground-colored, "possuming" insects themselves, which often feign death when disturbed.

Damage done by some forest insects can be seen from the air. Observers wearing amber face shields, which intensify yellows of insect-ridden foliage, use airplanes as flying observation platforms. They record on charts the degree and extent of forest foliage beneath them that is faded, discolored, or destroyed by larch sawflies and spruce budworms.

An insect's habits usually dictate best survey methods. If a pest spends part of its life in the soil, surveyors may use trowels, shovels, and even post-hole diggers to extract soil samples, and sift or wash them to expose the culprits. Finding some insects or insect eggs requires painstaking leaf-by-leaf, twig-by-twig or animal-by-animal examination with hand lenses, or carrying of plant samples to laboratories for microscopic examination. Insects well-entrenched within plant parts, such as the pink bollworm, European corn borer, and Mexican fruit fly, may require plant or fruit dissection.

The ordinary insect net, commonly associated with entomologists, is only one of many survey tools. Net sweepings of host plants are made for the spittlebug, potato psyllid, pea weevil, alfalfa caterpillar, lygus bugs, and numerous other insects. The man wielding the net may be a farmer making his own count of pests, to decide when to use insecticides, rather than a surveying entomologist.

Lures used to draw insects into

traps vary widely. Bright yellow attracts green peach aphids and Japanese beetles. When teamed with a chemical attractant, a yellow-painted trap will draw Japanese beetles from 500 yards away.

Traps for the high-flying cherry fruit fly must be set eight feet above the ground. Variations of old-fashioned sweet, sticky fly paper still prove most effective in trapping some insects. A sex attractant obtained from female gypsy moths brings male moths from half a mile away. Supplies of the attractant are sought in Portugal and Spain when low moth populations make it difficult to obtain it in quantity in this country.

An old-fashioned, hand-operated clothes wringer is used to crush cherries and dump them onto a screen, through which cherry fruit fly larvae fall into swirling water and are easily found. For its purpose, this simple machine is as efficient as the complex gin-trash separating machine designed to isolate pink bollworms from cotton trash.

Special instruments take stored grain samples from bins for pest-testing. They include (1) a five-foot, hollow-tube grain probe with cells that are opened, filled, and shut while in the grain; (2) a cylindrical container with two halves that spring shut at a touch to capture about a gallon of grain; and (3) a "pelican" sampler, or handled leather pouch, for scooping samples from the grain stream while the bin is being emptied.

Energetic European red mites that refuse to remain still to be counted on fruit-tree leaves are dumped into cardboard containers, along with the leaves, for a quick kill with chemical fumes. The leaves are then inserted between rotating brushes in an electrically-driven machine that dislodges mites and eggs onto cardboard discs for easy counting.

In surveys for harmful insects confined to a restricted locality, every precaution is taken to prevent spread. Surveyors for golden nematode of potatoes brush their shoes after leaving fields or potato-storage houses, usually wear cuffless trousers, and vehicles used near infested properties are steam-cleaned before being taken to non-infested land.

## Construction Starts On \$50,000 Mixing Plant in Kansas

LAWRENCE, KANSAS—Work has started on the construction of a \$50,000 liquid fertilizer and mixing plant at Buckcreek, six miles north of here, by the Kaw Fertilizer Service.

Heading the new organization is Dean McHard, a graduate in agronomy from the Oklahoma A&M College, Stillwater, Okla. Until recently he was with the Nitrogen Division of Allied Chemical and Dye Corp., at Kansas City, Mo.

The Kaw Fertilizer Service will immediately begin distribution from its bulk plant. The mixing plant will be in operation in about two months.

The firm will offer three systems of application. One method enables the farmer to rent a simple attachment for the rear of standard wheat drills, thus enabling the customer to plant and fertilize in one operation. A second method is custom application by the Kaw Fertilizer Service, and finally, the farmer may apply it himself with almost any spray equipment.

## INSECT AND PLANT DISEASE NOTES

## Mosquitoes Multiply in Wake of Hurricane Diane

BOSTON — Massachusetts is experiencing its worst mosquito plague in two decades, Dr. Bertram D. Gerry, entomologist for the State Reclamation Board reports.

The infestation, believed caused by the floods from Hurricane Diane, is worrying horse owners in Bristol, Plymouth and Norfolk counties because mosquitoes are spreaders of sleeping sickness.

Dr. Roy F. Feemster, state director of communicable diseases, reported there has not been a case of human encephalitis in the state since 1938.

Plans are under way for state sponsorship of a spray program to control the mosquitoes in the area.

## Florida Reports Large Insect Populations

GAINESVILLE, FLA. — Chinch bugs, in all stages, averaging 10 per sq. ft. of St. Augustine grass, were collected at Gainesville. This particular infestation covered approximately 20 sq. ft. Larvae of *Laphygma exigua* (Hbn.) was found heavily infesting soybeans at Zellwood, Orange County, while another larva, *Selenis monotropa* (Grote), averaging 10 to the plant, was collected from long pod some 9½ mi. west of Ft. Pierce, St. Lucie County.

Velvet bean caterpillar, in the adult stage, was found to be infesting hairy indigo at Ona, Hardee County and soybeans in Glachrist County. Counts were from 1 to 10 per plant.

Citrus areas were also affected by the insects. Black citrus aphids in all stages and green scale were collected on ruby red grapefruit about 2½ miles southwest of Ft. Pierce. Weevils, averaging one per leaf, were collected on mango 6 miles north of Ft. Pierce.—H. A. Denmark.

## Weevils Cause Damage In Oregon, Report Says

CORVALLIS, ORE.—Vince Roth, Cooperative Economic Insect Survey Entomologist, reports the pea leaf weevil has caused slight damage to strawberries by ragging leaves in Marion County. Jack Wells, county agent Washington County, has observed similar damage in his county.

Mr. Roth also reported collecting the sweet clover weevil in northern Deschutes County. This insect was first found in Oregon last year in Malheur County. In other areas of the U.S., it is a pest of sweet clover and alfalfa seedlings. In Oregon it has been found on sweet clover, Ladino clover and alfalfa. Heptachlor or dieldrin applied at the rate of ½ lb. actual material per acre is reported as effective in controlling the adult weevils.

Turner Bond, county agent Malheur County, has reported that the Colorado potato beetle was more abundant than ever noted before in his county, and required control on an estimated 10% of the total potato acreage. The treatment used was 5% DDT dust.

## Pink Bollworm Often Undetected in Cotton

EL PASO, TEXAS—Because of the publicity given the cabbage looper and green boll worm in West Texas, the pink boll worm damage to cotton crops often goes unnoticed until cotton harvest. Yet the infestation is severe in many areas. During the recent pink boll worm tour of the

valley, every farm visited showed some degree of infestation, ranging from 15 to 80% in the fields examined. Heavier damage was seen on the long staple cotton.

Pink boll worm infestations often go unnoticed by growers, said one authority, because upon hatching the worm immediately bores into the green boll leaving a hole so small that it is difficult to detect. The worms thus remain hidden in the boll and the grower often doesn't realize he has pink boll worm damage until the bolls fail to open at harvest time.

## Insects Still Reported Active in Kansas

MANHATTAN, KANSAS — Adult grasshopper populations remained light to severe in many areas of Kansas as of Sept. 16. Heaviest populations were found in southwestern and western counties during the recent Adult Survey.

Reports have already been received from one southwest Kansas county that grasshoppers have begun to feed on newly emerged wheat plants in that area. Counts made during the adult survey along roadside and field margins to wheat land in many western Kansas areas ranged from 4 to 22 grasshoppers per square yard. The heavier populations were localized; however, threatening conditions were found in many localities.

A limited survey of alfalfa fields was made to determine the presence and abundance of the yellow clover aphid. Non-economic to light infestations were found in nearly all fields that were examined in the following counties: Geary, Dickinson, Saline, Ellsworth, Russell, Ellis, Rush, Barton, Pawnee, Hodgeman and Finney. Counts ranged from 5 to 45 aphids per sweep (15-in. net). Predators were numerous in all of the aphid-infested fields.

Infestations ranging only 150 to 350 aphids per sweep were found in the same fields in Marion County where the week previous counts had ranged from 500 to 800 per sweep.

A limited survey of wheat fields in Russell, Ellis, Rush, Pawnee, Hodgeman, and Finney counties showed that infestations of false wireworm larvae were widespread throughout the infested fields and that some of the fields in this area did contain destructive numbers of this pest. The larvae were most easily found in low spots in fields under crop debris.

Counts ranged from 1 to 11 larvae per square yard; however, field averages generally ranged from 1 to 6 per square yard. Not all of the fields are infested; therefore, individual growers should examine their fields before planting to determine if destructive populations are present.

No wheat curl mites were found on samples of volunteer wheat that were collected in Finney, Hodgeman and Pawnee counties. Very few fields containing volunteer wheat were found in this area of the state. Samples of volunteer wheat plants collected from single fields in McPherson and Reno counties (Sept. 14-15) were found to have light mite infestations.

## Control Problems Face New Jersey Growers

NEW BRUNSWICK, N.J. — Cabbage looper has been severe on broccoli, cabbage, cauliflower, head lettuce and other vegetables. Severity of infestation, possible tolerance of DDT by worms, and laxness in applying materials have led growers to use various materials close to harvest. Growers should keep in mind that use of chemicals closer to har-

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## S. Carolina But Crops

CLEMSON, S.C.—Reported Sept. 14, 1955. Grasshopper numbers extremely numerous in South Carolina. Other highlights in South Carolina follow:

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## RETURN OF THE MOTH

MEDFORD, MASS.—Not many people of this community, if indeed any at all, remember the day 86 years ago when the gypsy moth was brought to the United States. The anniversary of that event is just past, but there were no celebrations to mark the occasion.

A French scientist, who in 1869 was interested in developing a hardy silkworm moth that could stand the rigors of the American climate, imported a moth from France that he thought would be the right one.

But some of the moths escaped. Within twenty years, the moth had infested 360 square miles around the point of escape.

Five years after that, the gypsy moth had spread over 2,200 square miles. It is now found throughout New England, New York, part of Pennsylvania and has been reported also in the western states.

More than \$65,000,000 has been spent by the government in the past 40 years to try to stamp out the gypsy moth.

vest than label indicates may result in excessive residues.

Lima beans have been damaged by activity of corn earworm, fall army worm, loopers, European corn borer. Five per cent DDT or one per cent parathion dusts have been very effective in control.

Sweet corn that was in silk about the time of storms and shortly after was seriously infested with corn earworm and to a lesser extent with fall armyworm. In general, growers who waited until 15-20% silking were not able to control earworm satisfactorily. This year's late earworm troubles compounded by presence of fall armyworm were very intense, following a relatively light early summer. There will be a great amount of interest in earworm control at winter meetings. Schedules, application equipment and other phases of control will be of keen interest.

European corn borer was light, although spotty infestations were observed.

Severe outbreaks of several cutworm species are present now. Glassy, greasy and other cutworms have been found damaging vegetable plantings from Cape May to Sussex counties. It is suggested that growers watch fall plantings closely and treat promptly with poison bait as recommended when trouble is found.

## S. Carolina Insects Active But Crops Look Good

CLEMSON, S.C.—A heavy infestation of Sericea webworm was reported Sept. 14, on 20 acres in Pickens County. Grasshoppers were also "extremely numerous," according to county agent reports.

Other highlights of insect activities in South Carolina are summarized as follows:

Heavy chinchbug infestations continue to plague farmers in Saluda and Lexington counties; red-headed pine sawfly reported in Colleton county; southern wilt of soybeans (Jackson variety) serious compared to other varieties, and European or Giant Hornet becoming more numerous in Piedmont.

Red spiders unusually abundant on azaleas in Orangeburg area; woolly-bear and puss caterpillar becoming numerous throughout state; root knot nematode attacking soybeans in Allendale, and downy mildew infections heavy on cantaloupes in Ridge area. Moderate to heavy fruit worm infestations on tomatoes in Ridge area.

Cotton farmers of South Carolina are being urged to destroy cotton stalks as soon as harvesting is completed as an effective means of reducing losses from both insects and diseases.

"The crop as a whole over the state continues to look good," where insect and disease control measures were taken, and immediate steps should be taken to eliminate the food supply for weevils, the Clemson Agricultural College Extension Committee advised on Sept. 15. Stalk destruction will also aid control of blight, anthracnose, and regular leaf spot, the advisory said.

## CSC Nitroparaffin Plant Begins Full Scale Production

STERLINGTON, LA.—The world's first full scale nitroparaffin production facilities were put into operation here this month by Commercial Solvents Corp., is was announced by J. Albert Woods, president.

Four basic nitroparaffins, nitromethane, nitroethane, 1-nitropropane and 2-nitropropane are now being produced at the new plant. Shipments commenced earlier this month.

No apparent limit to the application of the nitroparaffins in industry and agriculture was seen by Mr. Woods. Agriculture will utilize the nitroparaffins in the manufacture of pesticides.

While the textile industry will take a substantial portion of Commercial Solvents' 10 million pound annual output, other major users include the surface coatings, petroleum, photographic and chemical specialties industries.

The agricultural chemical industry was indicated as a potential large user of nitroparaffins. Full scale production here is expected to increase the availability and reduce costs, a Commercial Solvents official said.

It was pointed out that until now, sufficient quantities of the raw material have not been available to manufacturers for experimental purposes. High cost of the available nitroparaffins also has restricted the commercial development of derivatives with many agricultural possibilities.

Dilan, a mixture of 1, 1-bis (p-chlorophenyl) - 2 - nitropropane (Protan) and 1, 1-bis p-chlorophenyl-2-nitrobutane (Bulan), is one of the pesticides formulated with nitroparaffin derivatives. This insecticide is a specific for various bean pests.

Facilities for conversion of the basic nitroparaffins to derivatives are being operated by CSC at its Terre Haute, Ind., and Peoria, Ill., plants.

The firm has spent almost 21 years in bringing the nitroparaffins to full scale production, according to W. Ward Jackson, vice president in charge of the petrochemicals division. CSC contemplates further expansion of nitroparaffin production facilities as demand for these products increases, he said. The company also plans to make other derivatives from among the 2,000 known possibilities.

## ENTOMOLOGIST NAMED

STATE COLLEGE, MISS.—David F. Young, Jr., has been named assistant entomologist of the Agricultural Extension Service and began his duties Sept. 1, according to M. S. Shaw, associate extension director. He will help A. G. Bennett, extension entomologist, to assist county agents, home demonstration agents and others throughout the state with insect control problems.

## Pest Control Meeting Planned in Virginia

BLACKSBURG, VA.—Pest control operators from five states and the District of Columbia have been invited to attend a pest control operators' short course at Virginia Polytechnic Institute Nov. 9-11. Virginia, Maryland, Tennessee, West Virginia, and South Carolina, are the states expected to send delegates.

The U.S. Fish and Wildlife Service, Virginia State Pest Control Assn., and the Agricultural Experiment Station and Extension Service of VPI are cooperating in the program, which will stress identification, habits, and control of common species of flies.

Among speakers tentatively scheduled to address the group are L. C. Leonard, Portsmouth, president, Virginia State Pest Control Assn.; John C. Jones, assistant district agent, U.S. Fish and Wildlife Service; and R. M. Russell, technical director, Orkin Exterminating Co., Atlanta.

## Super Production, Shipments Show Decline in July

WASHINGTON—U.S. production of superphosphate for July amounted to 94,015 short tons (100% A. P.), according to the Bureau of the Census. This figure represents a decrease of 34% from the revised June, 1955, output and is 31% less than the figure reported for the corresponding month of 1954.

Shipments of all grades of superphosphate totaled 63,976 tons for July, a decrease of 8% from the previous month's volume and 6% below the figure reported for July, 1954.

Stocks on hand at the end of July were 1% more than those held on July 1, 1955, and 3% more than the quantities on hand as of July 31, 1954. These monthly figures, including percentage changes are unadjusted for seasonal variation and number of working days.

## Applicator School Starts in California

REEDLEY, CAL. — The Great Western School of Aeronautics opened its aerial applicators training program here this month. The program, which includes ground and flight training, is approved for Korean veterans. There will be a minimum of 30 hours of flight training with safety of operation being stressed, according to Glenn Engle, director of training.

## JUNIOR GROWERS TO MEET

NEW ORLEANS—The twenty-first annual convention of the National Junior Vegetable Growers Assn. will be held in New Orleans, December 11-15. Four-H Club members enrolled in the gardening project from all over the U.S. will participate.

## Striking Atlas Workers Reject Company Offer Of 8c Wage Boost

WILMINGTON—Striking workers of the Atlas Powder Co.'s Atlas Point plant Sept. 21 rejected a company offer of a new one-year contract with a wage boost of 8¢ an hour for most employees.

The vote on the offer was about three to one in favor of rejecting it, with 165 members attending. It was reported by Joe Maraschiello, the union representative.

Company officials and the union negotiating committee had arrived at the 8¢ increase in a bargaining session held Sept. 19 at the plant, just before the strike started.

The offer provided for a one-year contract—the company had previously sought a two-year deal. It also provided for extension of a contract clause calling for days off with pay to attend funerals of close relatives. In the new provision, the company agreed to pay an employee attending the funeral of his mother-in-law or father-in-law.

A company spokesman said the proposed new agreement also provided for a reclassification which would bring higher pay to many employees. Various classifications were to receive pay boosts of 3 to 23¢ an hour in addition to the general increase of 8¢.

The major products of the Atlas Point plant are sorbitol, emulsifiers, detergents and plasticizers.

## Trace Element Deficiency Reported in Wisconsin

MADISON, WIS. — Shortages of four trace elements—boron, copper, manganese and zinc—caused some trouble on crop fields around Wisconsin this summer, according to Art Peterson, University of Wisconsin soils specialist.

Boron deficiency reduced yields of alfalfa on a large portion of the 2,200,000 acres grown in Wisconsin this year. The dry weather helped make the deficiency very serious in some areas, according to Mr. Peterson.

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# Chemicals for Agricultural Use Discussed as Horticulturists And Biological Institute Meet

EAST LANSING, MICH. — Many of the 251 scientific papers given at the annual meeting of the American Society for Horticultural Science told about new developments in chemicals for agricultural use.

The 52nd annual meeting of the Hort Science group was held at Michigan State University as part of the annual meeting of the American Institute of Biological Sciences. Twenty-four national groups meet concurrently bringing more than 3,000 to East Lansing to help celebrate the centennial of M.S.U.

Among the horticultural papers given by the 251 selected scientists, the following results were reported:

Two speeches discussed grape production. The use of zinc chelate sprays have improved Emperor grape production, reported J. R. Kuykendall and V. W. Olney, Geigy Agricultural Chemicals, Bayonne, N.J. They said that increased growth and production of the vines resulted from foliage spray applications of An-EDTA. Vines treated with zinc chelate sprays, they said, produced berries with a higher sugar-acid ratio and higher total soluble solids.

In another paper about grapes, three Michigan State University specialists said that application of potash fertilizer to Concord vines resulted in substantial increase in yields of fruit where potash previously was low. The work with Michigan grapes was described by H. K. Bell, H. P. Larsen and A. L. Kenworthy.

In a paper about experiments with peas, Lawrence Rappaport and R. L. Carolus, Michigan State, revealed that highest yields and best quality of garden peas were obtained by early plantings coupled with nitrogen fertilization. They declared that application of ammonium nitrate to the early planting of five varieties tested increased productivity.

Two papers suggested way to combat strawberry runners.

Chemical sprays will inhibit strawberry runners, declared E. L. Denisen, Iowa State College, in his paper. He said that timely applications of maleic hydrazide sprays during the summer months prevented an overabundance of runners and runner plants in his experiments. Further effects, he said, were noted the following spring when early yields were increased 32% and the berry size was up 12%. The use of chemical runner inhibitors, Dr. Denisen pointed out, offers possibilities for greatly reducing strawberry production costs as compared to the hand pruning process.

The effectiveness of maleic hydrazide sprays was cited also by C. W. Hitz and M. S. Brown of University of Delaware. They assured that spraying in August or early September retarded growth of young runners, without serious inhibition by plants already rooted.

John C. Cain, New York Agricultural Experiment station at Geneva, N.Y., described experiments with Elberta peaches. For maximum production, he urged use of nitrogen fertilizer to increase tree growth, shoot growth and fruit set, along with light pruning and crop load control by chemical or hand thinning.

A University of Illinois specialist, W. W. Kelley, told about studies using three thinning materials on Elberta and Halehaven varieties of peaches. Fruit bud formation, he said, was decreased by all three thinning materials. He used naphthaleneacetic

acid, naphthylacetamide, and 3-Chloro-Isopropyl-N-Phenyl Carbamate.

Two satisfactory uses of growth inhibiting chemicals were reported by Ray Taylorson, Leroy Holm and G. E. Beck, University of Wisconsin. In their discussion of nursery problems, they found that growth inhibiting chemicals have made it possible for nursery stock to escape spring frost injury and yet make satisfactory growth by the close of the growing season. And such chemicals, they said, have been used to prolong the dormancy of plants held in common storage.

Through the use of TIBA, 2-3-5 triodo-benzoic acid, it may be possible soon to regulate flowering habits of plants to suit the environmental needs. That contention was made by Professors C. E. Wildon and C. L. Hamner, of Michigan State, who have succeeded in using the compound to hasten flowering of certain floricultural crops. They reported that with TIBA they have induced petunia and zinnia varieties to flower 10 to 20 days ahead of untreated plants.

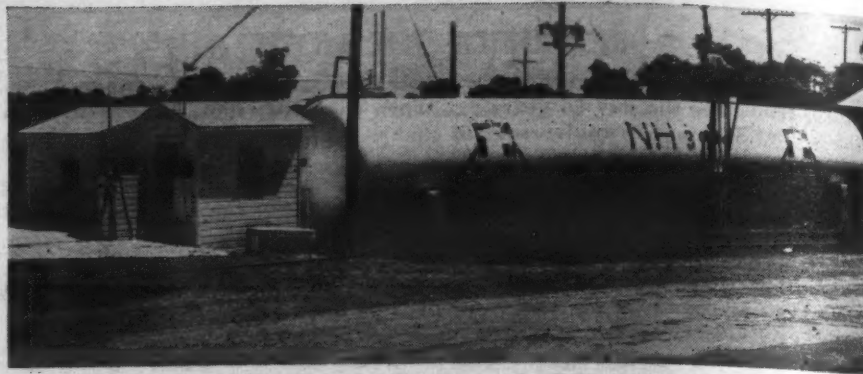
Two scientists reported the development of a low-cost, self-polishing fungicidal water wax for citrus fruit. William F. Newhall and William Grierson, Florida Agricultural Experiment Station, Gainesville, Fla., advocated an emulsion containing sodium o-phenylphenate as a fungicide with inexpensive synthetic waxes and resins. They suggested application at room temperature by dipping or flooding, and pointed out that the elimination of the polisher brushes reduces damage.

Two University of California men declared that the antibiotic candidin appears to be a promising contact fungicide. Stanley M. Alcorn and Peter A. Ark said their experiments found candidin active against the organisms causing bean rust, cereal rust, brown rot of stone fruit, and also pine blister rust.



George E. McMahon

IN NEW POST—George E. McMahon has recently been elected to fill the newly created position of executive vice president of Vulcan Containers, Inc., Bellwood, Ill. The announcement was made by Vern I. McCarthy, Sr., president. Mr. McMahon has been active in the steel shipping container industry for 24 years, 22 of which have been with Vulcan. He steps up from his previous position of vice president in charge of all manufacturing departments and personnel, a post he has held since 1942.



NEW AMMONIA PLANT—This 30,000 gal. anhydrous ammonia high pressure storage installation is one of twelve recently completed by Edward S. Nelson, Ltd., for customers of the Olin Mathieson Chemical Corp. The plant pictured here is located at Red Bud, Illinois.

## Edward S. Nelson Installs 12 NH<sub>3</sub> Bulk Plants for Midwest Distributors

CLARKSDALE, MISS.—Edward S. Nelson, Ltd., Clarksdale, Miss., has completed the installation of 12 new anhydrous ammonia storage and distribution bulk plants in four Midwest states.

The new plants, mainly 30,000 gal. installations, were built for bulk distributor anhydrous customers of Olin Mathieson Chemical Corp. in Indiana, Illinois, Wisconsin and Michigan. It represents a \$175,000 expansion program by the bulk plant operators.

In Illinois, new plants are located at Red Bud, Barclay, Gerard, Muncie and Perrysville. The plant at Red

Bud has been sold to Claude Simpson. At Barclay, Robert Westlake will distribute ammonia to farmers in the Springfield area operating as the Westlake Fertilizer Service.

The installation at Gerard was built for George Kemp of the General Feed Store. The two plants in the Danville area, one at Muncie and one at Perrysville, are owned by Stanley Lusader of Perrysville, operating as the Lusader Fertilizer Service.

Indiana plants include locations at Morocco, owned by H. E. Barnett, one at Marshall owned by Ray Steele, and one at Warren owned and operated by Mr. Harrison of the Harrison Implement Co.

The one new installation in Michigan is located at Wheeler. This bulk storage plant is operated by Mr. Larry Wright, manager of the Breckenridge Farmers Elevator.

The plants erected in Wisconsin by Nelson are an 18,000 gal. plant located at Fenimore which operates as Nitrogen, Inc., and a 30,000 gal. plant located at Cobb, Wis. Both of these plants are owned by Joe Groenthal of Cross Plains, Wis., who also owns and operates a plant at Cross Plains.

The completion of these new storage installations gives these four Midwest states an additional anhydrous ammonia storage capacity of approximately 360,000 gal.

## Olin Mathieson Offices Win Awards

NEW YORK—The offices of Olin Mathieson Chemical Corp., at 460 Park Ave. have been judged the best of 110 entries in two categories in awards presented annually by Management Methods Magazine.

Olin's conference room won the prize in this grouping, and the company also won a prize for the "Best Special Situation Solution."

Both areas as well as all of Olin's offices in 460 Park Ave. were designed by Designs for Business, Inc., 16 West 46th St., who submitted the Olin Mathieson offices for judging.

Of the company's conference room the magazine states: "A feeling of intimacy was built into a large room by the use of a concave, acoustical plaster dome which covers 90% of the ceiling area. A soft perimeter of light separates the dome from the ceiling. Beneath the dome, a circular table seats up to thirty persons. The table can easily be moved for special occasions."

"One wall contains a world map showing the company's holdings. The opposite wall is draped. The floor of the dining or meeting area is random-plank black walnut. An off-white nylon carpet is used in the television and lounge area. . . . A bathroom and service kitchen are located in the foyer."

Discussing the functional office and reception area which won the second award, the magazine noted how its space had been used to present an imposing picture of the company's products. A 64-foot gallery features examples of many of the approximately 10,000 company products. Its glass is in two-foot modules, and it blends with the white venetian terrazzo floor with inlaid polished brass strips, white milk glass, walnut and brass partitions, and the row of pin-point lights in the acoustical plaster ceiling.

## PLANT SCIENTIST DIES

KNOXVILLE — Dr. Frederick D. Richey, 71, former chief of the Bureau of Plant Industry, U.S. Department of Agriculture, died here recently. He left the USDA post 11 years ago to join the University of Tennessee Agricultural Experiment Station.



ARTISTIC PUBLIC RELATIONS—Prof. G. E. Lehker, Purdue University entomologist, shown above, presented an unusual medium for public information on insects and the pesticide industry at the National Agricultural Chemicals Assn. meeting, Spring Lake, N.J., Sept. 8. His talk, "A New Approach to Agricultural Chemicals Public Relations," featured chalk drawings to depict insect metamorphosis and physiology, their nerve system and respiratory system as well as other pictures to illustrate the economic side of agricultural losses to insects. Prof. Lehker said that the insecticide trade's importance to the economy should be "glamorized" on the popular level, but at the same time such information must be accurate and correct. He said that we are just entering the "chemicalized" era of agriculture and good public relations must be maintained so that "the fellow down the road" will have more complete knowledge of how pesticides may benefit him.

Brain Sanit  
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ST. PAUL, Minn. — "Brain sanitizers" to better visualize the clean from harvest were presented by elevator operators at a Minnesota study.

Robert L. Buehler, researcher, carried the direction of the study. He is head of the entomology department at the University of Minnesota. He is also a member of the National Association of Elevator Operators and the National Association of Elevator Operators.

The project started in 1953 by rodent control in Montana, the Dakota, and the Nebraska. It is now a total of 60 million dollars in rodent control at various points to milling. The Minneapolis area is the largest of the project.

Finding

Here are some of the findings. Contrary to popular opinion, rats are not the main pests of wheat. The main pests are mice. The mice must now mean "rodent control," not just "rat control." In the past, of 4,000 found rodents, only one fifth of one percent were contaminated by rodents.

Rodent contamination at the farm level moves toward the mill, insect contamination principally because of the mice and increased rodent control.

Rodent control is the year around problem when the damage is light enough to be ignored.

The rodent control is more serious in the winter months but all areas are affected.

Thanks to previous work, the percentage of contamination was complete. The rodent control is 100% effective. The rodent control is 100% effective. The rodent control is 100% effective.

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SAN FRANCISCO — Wage and salary surveys for manufacturing in California remained about the same for the first half of 1955.

The estimated annual increase for the month held steady for the first half of 1955, with the national edge for the first half of 1955.

The number of chemical workers between 1953 and 1954 was 1,100,000. The number of chemical workers between 1953 and 1954 was 1,100,000.

The number of chemical workers between 1953 and 1954 was 1,100,000. The number of chemical workers between 1953 and 1954 was 1,100,000.

Of this total, 1,100,000 were in the San Francisco area. The number of chemical workers between 1953 and 1954 was 1,100,000.



## Grain Sanitation Study At Minnesota Reveals Valuable Facts

ST. PAUL, MINN. — Some "big eyes" to better ways of keeping grain clean from harvest to milling center were presented farmers and grain elevator operators by a University of Minnesota study just completed.

Robert L. Butler, an entomology researcher, carried out the study under the direction of Dr. Clarence E. Mickel, head of the university's entomology department. Results are reported in Station Bulletin 431, "Insect and Rodent Contamination," now available free from county agents' offices or from the Institute of Agriculture, University of Minnesota, St. Paul 1.

The project studied wheat contamination by rodents and insects in Montana, the Dakotas and Minnesota, taking about 7,000 samples from a total of 60 million bushels of wheat stored at various points along the route to milling. It was sponsored by the Minneapolis Grain Exchange and is the largest of its kind ever undertaken.

### Findings Reported

Here are some of the findings: Contrary to popular belief, mice—not rats—are the principal contaminants of wheat. Thus "rodent control" must now mean "mouse and rat control," not just "rat control" as it has in the past. Of 4,500 samples tested and found rodent-contaminated, only one fifth of one percent has been contaminated by rats, 17% by mice.

Rodent contamination is most serious at the farm in first storage. As grain moves toward the milling center, insect contamination increases—principally because the insects reproduce and increase in the grain.

Rodent control on farms is important the year around. There is no time when the danger of contamination is light enough to be ignored.

The rodent contamination problem is more serious in some areas than in others but all areas have it.

Thanks to preventive measures on farms and at storage points, a very large percentage of the wheat sampled was completely free of either rodent or insect contamination. Of the 4,000 samples, 4,600—66%—were free of all contamination.

## California's Roster Of Chemical Workers Rises at High Level

SAN FRANCISCO — The number wage and salary workers in chemical manufacturing plants in California remained about the same during the first half of 1955 as compared with the same six months of last year.

The estimated average employment per month held about 36,000 during both periods, with possibly a slight fractional edge for the current year's figures, according to the Division of Labor Statistics and Research of the California State Department of Industrial Relations.

The number of firms manufacturing chemicals fell off slightly between 1953 and 1954, according to figures of the corresponding statistical division of the State Department of Employment. Based on the number of firms reporting for social security taxes, the total dropped from 1,161 in 1953 to 1,157 at the end of 1954. The slight decline did not appear to be a trend, since the 1952 figure was only 1,129, indicating a rise of 28 firms from two years before.

Of this total, 270 firms were located in the San Francisco area, as compared with 275 in 1953, and 701 in Los Angeles and Orange counties compared with 699 the previous year.

## Liquid Fertilizer Firm Established in Texas

COLEMAN, TEXAS — A new fertilizer firm has been established in Coleman County. It has been named the Ferti-Nur Manufacturing Co. and will manufacture and sell a liquid fertilizer made from sheep manure. The company will have its headquarters on the Reeves Ranch near Coleman. The owners are Robert L. Jones and P. J. Reeves. The fertilizer was developed by Mr. Jones, who has been experimenting with it for two years.

### ENGINEERING HEAD NAMED

URBANA, ILL. — Appointment of Frank B. Lanham, secretary of the American Society of Agricultural Engineers at the University of Illinois has been approved by the Board of Trustees. Mr. Lanham will take the place of E. W. Lehmann, head of the department since 1921, who is retiring on September 1.



NAC PANEL — Shown above are members of a panel who discussed the Miller Amendment during the recent meeting of the National Agricultural Chemicals Assn. at Spring Lake, N.J. From left to right are Dr. Charles E. Palm, head of the Department of Entomology at Cornell University; Winton B. Rankin, assistant to the commissioner, Food & Drug Administration; Lea S. Hitchner, NAC executive secretary who was panel moderator; John T. Coyne, assistant head, Pesticide Regulation Section, Agricultural Research Service, U.S. Department of Agriculture, and John Conner, NAC counsel. For a story of the panel discussion see page 1 of the Sept. 19 issue of Croplife.

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laboratory tests  
and  
practical use—

# DILUEX

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# Pesticide Formulations

As a carrier and diluent for insecticides, fungicides, sprays and dusts, Diluex and Diluex A exceed the most exacting qualifications of the agricultural chemical industry.

Diluex and Diluex A are basically an aluminum magnesium silicate mineral, having an amphibole-like structure possessing a large adsorption capacity for liquid impregnation procedures used in processing the newer complex organic insecticides. Both products are widely accepted as superior grinding or milling aids for technical grade toxicants such as DDT and BHC and will discharge readily from commercial dust applicators giving uniform coverage and maximum fractionation of toxicant and carrier in the swath.

Write for complete specifications and samples; our technicians are available to help with your processing operations.

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# ACS Hears Technical Papers on Fertilizer, Pesticide Topics

MINNEAPOLIS, MINN. — Papers on both fertilizer and pesticide topics were prominent on the program of the American Chemical Society's 128th national meeting at the University of Minnesota during the week of September 12. Authors of these papers represented both industry and governmental agencies. The ACS established a Chemical Management Subdivision of its Industrial and Engineering Chemistry Div., with Francis J. Curtis, vice president of Monsanto Chemical Co., St. Louis, as first chairman of the subdivision. Robert B. Semple, president, Wyandotte Chemicals Corp., Wyandotte, Mich., is chairman-designate.

Dr. Charles Allen Thomas, president of Monsanto Chemical Co., and former president of the ACS, received the 1955 Priestly Medal, highest honor in American chemistry. More than \$14,000 in other prizes and awards were also announced during the week-long meeting.

Some of the most important advancements in fertilizer technology since 1940 were outlined in a paper by Dr. A. M. Smith, Olin Mathieson Chemical Corp., Baltimore, Md. He enumerated these developments as follows:

1. Old processes have been improved and new processes developed for producing fertilizers of high plant-food content.
2. This improved technology facilitated the increasing use of fertilizers and expansion into new areas.
3. Ammonia production has been expanded to meet actual and immediate potential demands. Previously known but little used economies of production have been put into effect.
4. Direct application of anhydrous ammonia to the soil has come into general use through new methods and equipment for applying. This has also indicated new uses for aqueous solutions of ammonia and soluble nitrogen compounds.

The applied-in-the-soil cost of plant food elements as produced by different processes, old and new; the availability to crops as influenced by methods of manufacture, rates, times, and methods of application; the changing reactions between soils and fertilizers at increasing rates of application as they affect crop growth, recovery of applied nutrients, soil microorganisms, structure, and till all present many problems.

Cost of increase per crop unit is a measure of the value of any fertilizer process or product, assuming no difference in quality of crop, but further research on food and feed crops may develop nutritional information of far reaching effect on the fertilizer industry and on farm practices in the use of fertilizers.

## TVA Representatives Present Paper

Three representatives of the Tennessee Valley Authority, Wilson Dam, Ala., were authors of a paper describing small-scale preparation of ammonium phosphate-nitrate in a packed tower. They said that in producing fertilizers based on ammonium phosphate, the nitrogen to phosphorus pentoxide ratio can be adjusted by using some other acid along with phosphoric acid to tie up additional ammonia, such as the use of sulfuric acid in making ammonium phosphate-sulfate fertilizers.

The use of nitric acid for this purpose may offer some advantages, the

paper said, and the authors told of results of exploratory studies.

Use of preheated nitric and phosphoric acids neutralized with ammonia in the top of a packed tower produced materials covering a wide range of nitrogen to phosphorus pentoxide ratios, they said.

The operation was smoother than when ammonium nitrate alone was produced and the nitrate-phosphate melt could be prilled or flaked with ease. "The product was equal or superior to ammonium nitrate in hygroscopic properties and was comparable to ammonium nitrate-sulfate in its freedom from hazard as a promoter of combustion."

Authors of the above paper were A. V. Slack, J. C. Driskell and H. K. Walters, Jr., all of TVA.

Four other TVA scientists presented a paper on "Granulation of High-Analysis Fertilizers" at the meeting. They were L. B. Hein, G. C. Hicks, J. L. Silverberg and L. F. Seatz. They reported on methods of production of granular, high-analysis fertilizers in which the TVA-type continuous ammoniator was used in conjunction with auxiliary equipment. Combining the ammoniation and granulation steps permitted economies in equipment, economies of formulation based on increased proportions of lower cost nitrogen sources such as ammonia and nitrogen solutions, and economies in operation by granulating at low moisture content and using the heat of the ammoniation reactions to dry the products.

The need for artificial drying was eliminated for high-nitrogen grades such as 10-20-20 and 12-12-12, and the extent of drying needed for other grades was decreased. Also, some work was done on granulation of formulations such as 6-12-12 and 5-20-20, which could not be granulated at low moisture contents. Water, steam, or both were added in the ammoniator to promote granulation, and the products usually required drying, the paper said.

## Granulation of Mixed Fertilizer

John O. Hardesty, Andrew Szabo and Joseph G. Cummings, USDA, Beltsville, Md., were co-authors of a paper pointing out some effects of formulation on granulation of mixed fertilizers. They declared that there is a great need for basic information on optimum conditions for agglomeration of a wide range of formulations, in view of the current trend toward granular mixed fertilizers.

The paper reported on laboratory studies made on the individual and combined effects of ammonium nitrate, ammonium sulfate and potassium chloride contents on moisture requirement for optimum agglomeration and on agglomeration efficiency of mixed fertilizers at approximately 194° F.

They reported that ammonium nitrate was most effective in decreasing the moisture required for optimum agglomeration followed by ammonium sulfate and potassium chloride in that order. An apparent direct relationship was observed between salt solubility and the rate of decrease in moisture requirement with increase in soluble salt content of the mixed fertilizer.

Replacement of ammonium sulfate with ammonium nitrate equivalent to seven units of nitrogen in ammoniated mixed fertilizers, prepared with either ordinary or triple superphos-

phate and potassium chloride as sources of phosphorus pentoxide and potassium oxide respectively, reduced the moisture requirement for optimum agglomeration from approximately 14 to 2% for 1:1:1 ratios and from approximately 16 to 6% for 1:2:1 ratios.

Agglomeration efficiency as indicated by the maximum yield of 6- to 20-mesh product varied with the formulation. The data aid in predicting the agglomeration characteristics of mixed fertilizers from their proposed formulas.

"Relative Effectiveness of Coating Agents on Granular Mixed Fertilizers" was the title of a paper by Rikio Kumagai and Dr. Hardesty, USDA. They pointed out that although granulation makes possible the use of many high-analysis fertilizers, caking is still a problem in some mixtures.

## Caking Tests on High-Analysis Goods

The paper reported results of 400 laboratory caking tests on high-analysis, granular mixed fertilizers with and without the addition of some 20 different coating agents. Crushing strengths of cakes prepared from 12-12-12 fertilizer in the particle size range of 10- to 20-mesh (1.65 to 0.83 mm.) were reduced 14 to 100% depending on the agent employed as a 2% coating.

Diatomaceous earth, phosphate by-product, Fuller's earth, kaolin, magnesium, silicate, and perlite reduced the crushing strengths of the cakes 70 to 100%; such materials as pyrophyllite, montmorillonite and powdered vermiculite 40 to 70%; and others such as spent Fuller's earth, less than 40%. One per cent of diatomaceous earth was as effective as 2% of such agents as pyrophyllite and powdered vermiculite.

Tests generally showed that the ability of coating agents to reduce or eliminate caking of granular fertilizers is dependent on the initial moisture content of the mixture, particle size, and shape of the granules, and the kind and amount of agent used. The data should serve as a guide in the selection and use of coating agents for granular fertilizers, the authors commented.

Two Iowa State College engineers, D. R. Boylan and M. A. Larson, presented a paper, "Fertilizer by Fusion of Phosphate With Gypsum." They said that phosphate rock containing 32.5% phosphorus pentoxide was fused with gypsum in various proportions in a gas-fired laboratory combustion chamber and an electric arc tilting furnace. The molten product was quenched in water and subsequently dried.

Products of high phosphorus pentoxide (>90%) were obtained with mixtures of phosphate rock and gypsum in the proportions of 1 part rock to 2 parts gypsum. For the fusions in the gas fired furnace langbeinite, muriate, or glasserite was used as a flux in the proportion of 1/2 part. Higher proportions of the flux in the mixture resulted in a decrease in phosphorus pentoxide availability.

Typical products made by fusing a mixture containing 30% phosphate rock, 60% gypsum, and 10% glasserite contained at least 11% total phosphorus pentoxide and 10.5% available phosphorus pentoxide as determined by 2% citric

acid. The products were granular, nonhygroscopic, and easily ground.

The granulation of high-analysis fertilizers was discussed in a paper authored by L. B. Hein, G. C. Hicks, J. L. Silverberg and L. F. Seatz, TVA. They described methods for production of granular high-analysis fertilizers in which the TVA-type continuous ammoniator was used in conjunction with auxiliary equipment. Combining the ammoniation and granulation steps permitted economies in equipment, economies of formulation based on increased proportions of lower cost nitrogen sources such as ammonia and nitrogen solutions, and economies in operation by granulating at low moisture content and using the heat of the ammoniation reactions to dry the products.

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In addition to the sessions on fertilizer technology, the ACS Pesticides Subdivision discussed chemical means of determining amounts of residues on plants.

A paper by George R. Boyd, Virginia-Carolina Chemical Corporation, Richmond, Va., discussed methods of analysis for "V-C 13 Nemacide." Another paper by Paul A. Giang and Floyd Francis Smith of the Entomological Research Branch of USDA was given, describing "Colorimetric Determination of Metaldehyde Present in Plant Residues." Mr. Giang was also co-author with F. F. Smith and S. A. Hall, of a paper, "Enzymatic Estimation of Dimethyl 2-dichlorovinylphosphate (DDVP) Spray Residues."

The use of radioactive phosphorus 32 in the synthesis of Diazinon was described in a paper by Spiro J. Loulides, J. N. Kaplanis and C. C. Roach of the Department of Entomology, Kansas State College, Manhattan, Kansas.

Two papers were presented on the subject of Captan. The first of the was an evaluation of the safety of Captan for use in warm blooded animals. It was presented by R. V. Hoboken, Hazelton Laboratories, Falls Church, Va., and E. G. Batt, California Spray Chemical Corporation, Haddonfield, N.J. They report that many species of domestic animals have been fed diets containing high levels of Captan without ill effects. They said further that no off-flavor could be detected in the meat or milk of these animals.

The other paper on the uses and effectiveness of Captan was presented by Dr. P. D. Peterson and J. D. Bashour, Stauffer Chemical Company, New York.

This paper indicated that the low toxicity of the material has made it useful in pre-harvest sprays and post-harvest treatments to prevent rot in shipment and storage. The product was reported to control numerous diseases of apples and to help produce high quality fruit in controlling various diseases.

## Insecticide Residues On Forage Crops

Another paper on the persistence of insecticide residues on forage crops was presented by R. H. Carter, F. W. Poos, D. A. App and Ray Ely of the Agricultural Research Service of USDA. They said that dieldrin, endrin and heptachlor were sprayed on growing alfalfa and samples were retained for residue

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**Special  
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# Better Selling

**Richer  
Fields for  
Dealers**

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

## Advertising, Personal Contact Help Build Business for New Mexico Dealer

Ben Slaughter of Hobbs, N.M., had never operated a business of his own. Yet, two years after buying a farm supply store, he had increased sales by 300%. His Slaughter's Feed & Supply was selling feed to ranchers and garden supplies to the town residents.

All that time there was a growing number of new irrigation farmers he hadn't been able to reach. The reason was simple. They came to Hobbs for groceries and other supplies, but for farm implements, parts, insecticides and fertilizers they had been going to a neighboring town.

"That farm trade was looming bigger and bigger all the time," said Mr. Slaughter. "I decided the best thing to do was to get acquainted with those farmers."

He not only went to the farms and talked to the men on their tractors or visited them in their homes, but he carried along sacks of fertilizer and insecticides in the small truck he drove.

The farmers liked this young business man. They made inquiries among the ranchers and found out he had an up-and-coming business. Before long a few started to drift into the store, then more. Finally his insecticide and fertilizer business began to compete with his feed sales in volume.

Mr. Slaughter has some definite ideas on running a business and finds that they pay off in more sales and an increasing number of new customers.

He believes in personal contact, and still makes those trips out into the farming district where he visits with dozens of farmers and tries to find out their problems. Occasionally something revealed on a trip will result in his stocking merchandise to overcome a particular problem. If a certain insect is beginning to work on the cotton, Mr. Slaughter knows when to get a supply of the proper insecticides.

In his store he practices unfailing courtesy. No purchase is too small for him to handle personally if the customer requests it.

"You never know," he says. "One of those two-bit fertilizer sales to a woman may develop into several hundred dollars worth of business."

This dealer worked on a farm as a boy, but then became a private secretary and auditor for a large oil company. This business training is invaluable now. He has the store arranged neatly by departments with plenty of signs to show the customer the various kinds of merchandise and price.

Many times when there is only one employee in the store, he can wait on several dozen customers an hour. They can see what they want, and most of them bring the merchandise to the cash register and pay for it. If it is in large quantities, the clerk writes out the order, and a truck carries the merchandise to the customer's farm. Since most farmers own pick-up trucks, however, he is not called upon to make any deliveries except very large ones.

Mr. Slaughter believes in keeping a meticulous set of books. After his

experience as an auditor, careful bookkeeping has become second nature to him.

"I know exactly how my business stands," he said. "We have week-by-week records on sales, overhead, costs, credit and advertising. If some part of the business structure weakens, I can spot it instantly and do something about it."

He knows the value of advertising and has tried all kinds. Radio and newspaper advertising are both fine, he said, but special announcements in the newspapers will bring more new people into the store than routine ads.

Another form of advertising he likes is his bulletin board. Besides the regular blackboard where items are listed and priced, he has a special one for farmers' use only. On this board his customers can advertise

(Continued on page 14)



**NEW MEXICO DEALER**—Ben Slaughter, left, owner and manager of Slaughter's Feed & Supply, Hobbs, N.M., is shown above in a typical scene in his store. "Farm chemicals are becoming more important every year," Mr. Slaughter says. "The man who haphazardly tries to sell them soon will be out of business."



### SHOP TALK

### OVER THE COUNTER

### FOR THE DEALER

By EMMET J. HOFFMAN

Except for those few who conduct one-man operations, every dealer has a daily line-up of chores facing him as he opens his doors every morning. Every dealer has to, or is expected to do, some thinking, judging and deciding every day. He himself has to get the necessary jobs done around his store or see that his employees get them done.

The dealer, or management in other words, has big responsibilities. Many of his decisions are tough ones. An unfortunate choice of several wrong decisions can even mean financial trouble for the dealer.

It is interesting to note that one manufacturing organization in the fertilizer and feed lines, at a conference of executives who direct policies, sales, advertising, manufacturing and distribution, asked this question of the group: "What is the one factor most important to our business, if it is going to continue to grow and provide services?"

What's your guess? New outlets? Intensified sales efforts? Training? New equipment? New facilities?

#### No. 1 Necessity

The group decided it was none of the above factors. They agreed that capable management with vision and foresight was the factor necessary to assure continued business success for the organization.

A further interesting observation is

a statement made by Ralph J. Cordner, president of the General Electric Co., in which he said: "Not customers, not products, not money, but managers may be the limit on General Electric growth." Of course, the fertilizer dealer and GE make inadequate comparisons but in one respect, the need for adequate management for both makes sense.

GE is doing something about it, too. The company is establishing a complete business administration college which it will own, lock, stock and text book. Here each year some 300 GE executives from all levels will

(Continued on page 14)



By RAYMOND ROSSON  
County Agent, Washington County, Tenn.

As dealers, you know many of your customers, but it is almost an impossibility to know all of them, and I know you wish it could be otherwise.

When a business grows beyond those you can call by their "First Name" the value of the right kind of reputation becomes most necessary . . . business then is dealing with the public, and the public judges on three things, mainly . . .

Friendliness . . . fair dealing . . . good values . . .

But with the dealer serving agriculture there is one very important, extra thing that counts for more than you might suppose . . . and that is . . . "Giving the customer correct information about your product and what he might expect from it, provided he uses it as you suggest." . . . Therefore, 'tis a mighty good thing to be informed.

Everyone knows that "Good Values" and "Fair Dealing" are two musts, but what about "Friendliness?" No business these days considers itself too big to respect the importance of making friends and keeping them. . . . Friendliness is a "Cash Asset."

Public relations, can well be shown on your part, by boosting the things agriculture needs and the things you do together. . . . You are proud to live where agriculture and business relations are 100%.

A good motto . . . "Better Towns To Serve A Better Agriculture."

#### Weed Control Program

SACRAMENTO — Butte County supervisors have appropriated \$5,000 from the county reserve fund to resume a modified version of a former puncture vine weed control program. Under the plan weed control work will start next spring after a survey of infestations. The county will then perform control services on roadsides where the property owners request it and agree to cooperate in an eradication program on their own lands.

## ACP Provides Benefits to Great Plains

Ervin L. Peterson, assistant secretary of agriculture, has urged farmers and ranchers in the Great Plains to make full use of the Agricultural Conservation Program in solving some of their problems. It can help in the present emergency and in making long-time adjustments in land use, he said.

The 1956 National Agricultural Conservation Program is more flexible than in recent years. Rates of

cost shares under ACP for certain practices may be over half of the cost. Such practices usually are more costly to install and bring delayed benefits. Farmers will, however, continue to make a substantial contribution to the cost.

The state Agricultural Stabilization and Conservation committees (including the state director of extension) jointly with Soil Conservation Service and Forest Service representatives

and with the counsel and advice of other agricultural leaders, develop the State Agricultural Conservation Program. Most state programs will be developed and announced Oct. 1.

"County programs are developed by the county ASC committee with SCS, FS and other local agricultural leaders assisting," Mr. Peterson said. "Program development rests with these groups who are most familiar

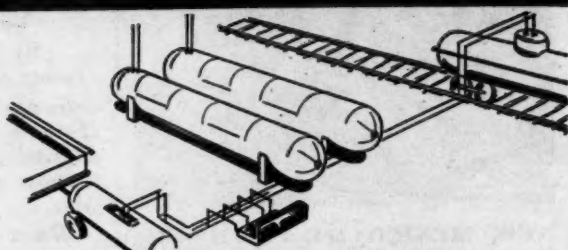
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## DO-IT-YOURSELF

SAVE  
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...on installation costs  
with BEAIRD'S packaged  
storage stations

**NOW . . .** get the extra storage you need and save money, too. Do-it-yourself with a Beaird packaged bulk storage plant shipped complete with every pump, valve, fitting and accessory you need to put it into operation. You buy nothing extra! And three to five-year financing may be arranged.

Preassembly at Beaird and easy-to-follow building plans make it easy for you to install the complete packaged plant with minimum field work and outside labor. Much of the installation may be made by your own employees. As further assurance of proper assembly, a Beaird field engineer supervises the entire installation, including unloading, placing tank on foundation and piping as well as unloading the first car of ammonia for you and demonstrating the plant operation to your employees.

Before you build your bulk plant, see how much you may save by installing your own Beaird packaged storage station. Write today or ask your Beaird representative for a quotation on your requirements.

## SINGLE TANK

30,000-gallon "do-it-yourself" bulk storage station installed for plant or field storage. Beaird do-it-yourself packaged bulk plants are individually designed with one or more tanks to fit your requirements, engineered to meet all state and code regulations.

## DOUBLE TANK

Packaged installation of 30,000-gallon tanks. Other sizes: 2,000 to 30,000-gallon capacity. Identical bulk plants may be ordered on a "turn-key" job basis, with Beaird field engineers handling every detail.

## SINGLE-BARREL TRANSPORT

Bigger payloads for dealers—new Beaird 6,165-gallon trailer transports for NH3. Designed to eliminate dead weight, transports deliver bonus payloads up to 1,000 gallons.

**THE J. B. BEAIRD  
COMPANY, INC.**

Shreveport, Louisiana

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BEAIRD



## FARM SERVICE DATA

Extension Station Reports

Oregon grass seed growers, along with Oregon State College research and extension workers, are preparing defenses against Silvertop disease that destroyed 2,000 acres of Chewings fescue this year in Clackamas County and could become a statewide problem with other grass seed crops.

Recommendations for burning of infested fields after harvest and a spring DDT spraying or dusting program aimed at checking probable insect carriers of the fungus disease have been formulated by the college as stop-gap measures. This is the first season the disease has been a serious problem in Oregon.

Wheat growers will get better stands and higher yields of quality grain by treating their seed before planting time, according to W. J. Henderson, extension plant pathologist at Colorado A&M College. He says seed treatment usually costs about 1½ to 2¢ bu., yet the small investment pays high dividends in increased yields and quality of the wheat crop.

Chemical treatment of seed wheat controls seed rot, seedling blight and stinking smut. It also controls root rot infection caused by seed-borne *Helminthosporium*.

Farmer use of commercial fertilizer in amounts up to recommendations can assure more production per acre of better quality crops, thus materially increasing net profit, says the California Fertilizer Assn. The association referred to a current report of the U.S. Department of Agriculture concerning the 1955 cotton crops as an example.

Department authorities have just raised their estimate as to 1955 cotton production by about one million bales to 12,728,000. More liberal use of fertilizer this year is given as a principal reason for the bumper crop expected from the 2.6 million fewer acres planted. They report that there is general compliance with acreage allotments, but that returns expected per acre will be 367 lb. compared with a ten year average of 279 lb.

The association does not recommend total increased production of crops now in surplus, but suggested that the best land be retained for the cash crops which are adapted to it, making more land available for other crops, and for improved pasture.

The materially increased cash crop production per acre assured by use of mixed fertilizers containing nitrogen, phosphorus and potash, together with savings in labor, water and other expenses will return more net profit, says the association. At the same time replacement crops and improved pasture, properly fertilized will provide additional farm income.

Oregon farmers can expect increased attention during the next two years to local problems on how soil conservation districts can best serve them, according to the Oregon State Soil Conservation Committee.

The 1955 to 1957 biennium program issued recently from committee headquarters at Oregon State College proposes more advisory assistance in developing district programs. Increased farmer representation on the state committee is expected to further strengthen the program.

Oregon now has 50 soil conservation districts created under state law through petitions and referenda of

landowners. The districts embrace 33,630,000 acres of land in 29 counties and contain 40,911 farms and ranches. Fourteen counties are completely covered by districts.

"More Arizona cotton growers are recognizing defoliation as an aid to better cotton production." That is the opening statement in a new revision of the University of Arizona Extension Service circular 203, "Defoliating Cotton in Arizona."

The circular was written by Lamar C. Brown of U.S. Department of Agriculture who now has headquarters on campus at the University of Arizona, and Charles C. Ellwood, extension agronomist.

Benefits of defoliation, the factors that help in good defoliation, the difference between "defoliants" and "desiccants," bottom defoliation, rates of defoliants, and the use of new chemicals are included. The circular is well illustrated with photographs and contains a simple table of defoliants and rates.

Anhydrous ammonia applied in late January supplies nitrogen to cotton on Gila fine sandy loam as effectively as that applied just before or after planting, says M. R. Pack, assistant agronomist at the Agricultural Experiment Station, New Mexico A&M College.

Mr. Pack bases his conclusion on tests made on the James F. Collier farm, west of Berino, N.M., in 1954. The ammonia was applied at the rate of 100 lb. to the acre at five different times, ranging from January 22 to July 21. The July 21 applications were sidedressed. Earlier applications were drilled into the soil at 1½ ft. intervals. The cotton variety used was 1517C.

Seed cotton yields, in pounds per acre, by date of fertilizer application, were as follows: no fertilizer, 1,320; Jan. 22, 1,730; Feb. 23, 1,660; April 1, 1,750; split (½ on April 1, ½ on July 21) 1,500; and July 21, 1,480.

Mr. Pack says that the low yields from the plots fertilized late in the season were caused partly by uneven stand on a few of the plots, but that the July applications were probably too late to give the full benefit of the fertilizer. He points out that heavier soils than that on which he made the tests should retain ammonia even better, and they should respond just as well to early applications.

A new Wyoming Agricultural Extension Service circular gives the latest recommendations for controlling insect pests on crops. The circular is divided into sections by crops. Under each crop, it lists insect pests and methods of control. Crops covered include alfalfa and clover, crested wheatgrass, beans, peas, potato, sugar beets, small grains and corn.

Insects and their controls listed include alfalfa weevil, army cutworm, blister beetle, clover seed chalcid, clover-head aphid, grasshoppers, legume bug, pea aphid, sweetclover weevil, crested wheatgrass bug, flea beetle, Mexican bean beetle, seed-corn maggot, wireworms, pea weevil, Colorado potato beetle, potato psyllid, tuber flea beetle, beet webworm, sugar-beet root aphid, sugar-beet root maggot, army worm, English grain aphid, green bug, pale western cutworm, wheat stem maggot, wheat stem sawfly, wheat jointworm, white grubs and corn earworm.

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## Hopper Control Pays Off in Texas Panhandle

COLLEGE STATION, TEXAS—A recent survey made in eight Texas Panhandle counties showed that from 95 to 98% control of grasshoppers was obtained by chemical sprays. Only in isolated areas where the terrain was rough and vegetation rank was the control poor, says the surveyors, J. M. Landrum of the U.S. Department of Agriculture Plant Pest Control Branch and C. F. Garner, Texas A&M assistant extension entomologist.

They report that approximately 700,000 acres of rangeland was sprayed during 1955 in 13 Panhandle counties with a resulting saving of \$525,000 to the ranchmen.

The average increase in grass growth where infestation was heavy and control was practiced was more than 200%. Studies have shown that only 6 to 7 'hoppers per square yard on 10 acres can consume grass at the same rate as a cow. Infestations of 30 to 60 'hoppers per square yard may get all of the grass.

A recent survey shows that 2½ million acres of rangeland in the area are still heavily infested. On the uncontrolled lands an estimated \$1,875,000 worth of grass has been destroyed. The entomologists say an expenditure of 60¢ an acre for spray applied at the proper time could have saved most of this loss.

## Meetings of Interest To Industry Planned in New Mexico

STATE COLLEGE, N.M.—Education in the use of farm chemicals will be part of three programs planned by New Mexico A&M College.

A turfgrass conference will be held Oct. 6 and 7 for persons interested in growing lawns for golf courses, cemeteries, military bases, schools and other institutions. John Durkin, New Mexico extension entomologist, will discuss insect control in turf, and John Long, assistant in agronomy at the A&M Experiment Station will deal with weed control. The conference is a new project, and plans will be made to organize a turfgrass association in the state.

On Oct. 10, the A&M Experiment Station and Extension Service will sponsor their 15th annual Ranch Day program. J. F. Arnold of the U.S. Forest Service, Tucson, will discuss "Juniper Control." K. A. Valentine, associate animal husbandman at A&M, will talk on "Mesquite Control."

The same sponsors will hold their annual Farm Day program Oct. 11. Farmers of the state will tour the agronomy department's test areas and see various experiments including chemical control of Johnson grass. Glen Staten, A&M agronomist, is chairman.

## Horace M. Armitage To Retire Nov. 1 From California Post

SACRAMENTO—Horace M. Armitage, chief of the Bureau of Entomology of the California Department of Agriculture, has announced his retirement, effective Nov. 1.

Mr. Armitage will be 65 years old on September 28, 1955. He plans to become a consulting entomologist after his retirement.

Born in Butte, Mont., and educated in Corona, Cal., he started his career with appointment as San Diego County Horticultural Inspector in 1913. He became San Diego County Horticultural Commissioner in 1915, and three years later entered the state service as assistant superintendent of the State Insectary at Alhambra. He later served as assistant entomologist in charge of the insectary at Whittier, Cal., and in 1923 was appointed deputy county agricultural commissioner in Los Angeles county in charge of the county insectary.

In 1931 Mr. Armitage returned to state service as associate chief, Bureau of Plant Quarantine, in charge of the bureau's work at the Port of San Francisco. In 1943 he came to Sacramento as chief of the Bureau of Entomology and Plant Quarantine. When these two functions were separated in 1945 he remained as chief of the new Bureau of Entomology.

In his present position Mr. Armitage has been responsible for detecting the presence of new, major insect pests of agriculture within the state and attempting their eradication.

He has planned and carried out eradication measures against the grapeleaf skeletonizer in San Diego County, the Mexican bean beetle in Ventura County, the citrus white fly in Orange, Los Angeles, Fresno, Madera and San Benito Counties, the cherry fruit fly in Siskiyou County and Hall's scale in Yolo and Butte Counties.

Mr. Armitage also recently carried out protective measures designed to prevent spread of the Mexican fruit fly into California. In 1949, he acted as technical adviser to a subcommittee of the state legislature's Joint Interim Committee on Agriculture and Livestock Problems, visiting the Hawaiian Islands to review the Oriental fruit fly problem as it concerned California's fruit industry.

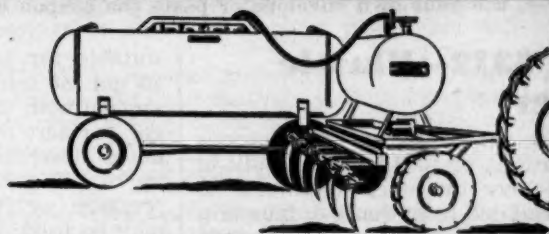
Mr. Armitage also has been responsible for conducting statewide control measures against grasshoppers, the sugar beet leafhopper and, most recently, the Khapra beetle.

During the past three years he has served as a member of the governing board of the Entomological Society of America as well as past president of the Pacific branch of that organization, comprising the eleven western states. He also is a member of the American Association for the Advancement of Science, a past president of the Pacific Coast Entomological Society and a member of various state entomology clubs. He also is the author of many articles and papers on his specialty.

## Sure way to BIGGER PROFITS

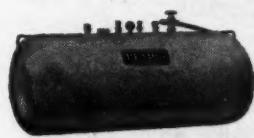
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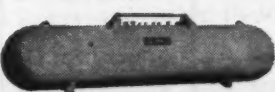
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Beaird applicator tanks—110, 150, and 200-gallon sizes. Available unfitted or fitted with highest-quality fittings. Gleaming white "Weather-Weld" enamel finish.



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Beaird packaged storage station available for do-it-yourself installation with all necessary pipe and fittings, pump and safety controls. Shown: 6,000-gallon; other sizes from 2,000 to 30,000 gallons.



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**BEAIRD**

## 22,158,000 People on Farms

WASHINGTON — The population living on farms in the U.S. numbered about 22,158,000 in April, 1955, according to an estimate prepared cooperatively by the Bureau of the Census, Department of Commerce, and the Agricultural Marketing Service, U.S. Department of Agriculture. This figure is not significantly different from the corresponding estimate for 1954 but represents a drop of approximately 3,000,000 from 1950, when an estimated 25,058,000 were living on farms.

The drop in farm population represents a continuation of the long-term downward trend, which has reduced the number of farm residents to

13.5% of the total population by 1955. Changes have been particularly marked since the beginning of World War II. Between 1940 and 1945, the number of persons living on farms decreased by over 5 million. Some return to farms occurred following the end of the war. After 1948, the downward trend was resumed; and, since 1950, farm population has decreased on the average about 600,000 persons per year.

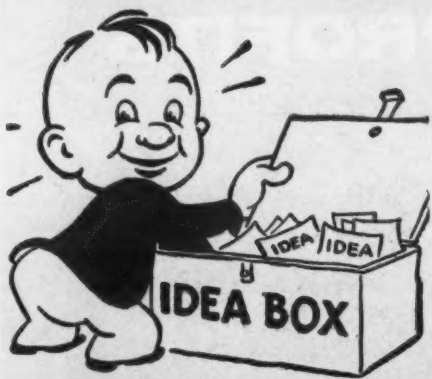
Of the 8.2 million employed persons 14 years old or over who were living on farms in April 1955, about 5.2 million were employed in agriculture and 3 million were employed in non-agricultural industries.

BEAIRD



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## What's New...

### In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

#### No. 6312—Plastic Liner

A booklet concerning the various applications of "JaLiner"—a built-in plastic liner for steel containers—is now available from Jones & Laughlin Steel Corp. The booklet describes the construction features of the liner and the ways in which the polyethylene liner can solve "hard-to-package" problems as well as routine uses. Also listed is a partial guide to the application of polyethylene in liquid and chemical solutions. Secure the booklet by checking No. 6312 on the coupon and dropping it in the mail.

#### No. 6313—Applicator

The John Blue Co. is producing a new, trailer-type applicator for the application of nitrogen solutions—the series "20-NS." The new applicator is available with either applicators for underground application or a boom for surface application. The unit comes equipped with the newly-developed model "NSF" fully enclosed nitrogen solution pump. The applicator is claimed to be suitable for almost every need and is available with a 14-ft. tool bar for row crop and top dressing or with a 21-ft. boom

suitable for broadcast work. Up to 75 gal. of solution per acre may be applied with the tool bar or up to 50 gal. per acre may be applied with the boom attachment. Tank capacities of up to 200 gal. are available. Either pressure or non-pressure solutions may be used. Check No. 6313 on the coupon, clip and mail it to Croplife to obtain more complete details.

#### No. 6316—Bulletin

A new "Prentox Information Bulletin" has been published by Prentiss Drug & Chemical Co., Inc. It contains a suggested label outline for Prentox Pyronyl dust concentrate in combination with Rotenone and fungicides. Copies are available upon request. Check No. 6316 on the coupon and drop it in the mail.

#### No. 6314—Sales Aids

Available from the Velsicol Corp. are three merchandising aids on household and garden insect control with chlordane. They are: Four-color, true-to-life pictures of an ant, carpet beetle, chigger, clothes moth, silverfish, spider, mosquito, roach and white grub (Japanese beetle larvae) designed for store display; a 12-page chlordane garden booklet with tips

on garden practices; and a 16-page booklet entitled the Chlordane Household Insect Folder, which points out the key "kill zone" points in the home and how to apply the product. The merchandising aids may be obtained without charge by checking No. 6314 on the coupon, clipping and mailing it to Croplife.

#### No. 6315—Label Imprinting

Imprinting variable data such as color, batch number, content, etc., directly on lithographed or preprinted cans or other cylindrical containers can now be done with a new machine designed by the Markem Machine Co. The new machine is claimed to permit imprinting specific legend in quantities as required, eliminating paper labels. Features claimed for the model 70AF machine are: Quick adjustment for marking cans ranging in size from 1/32 to 1 gal.; operating speed up to 1,500 imprints per hour; maximum imprint area of 2" x 6". Secure more complete details by checking No. 6315 on the coupon and dropping it in the mail.

#### No. 6317—Liming Slide Rule

A slide rule has been devised by the La Motte Chemical Products Co. that can give the liming requirements for any plant, flower, tree, shrub, vegetable or farm crop grown in any type of soil. The plant group slide is positioned opposite the soil acidity reading and the amount of lime required for the best growing condition is read directly from the scale. Alum requirements for alkaline soils are also given. The rule has separate scales for small areas and for farm operations. A free brochure on the soil reaction slide rule is available. Check No. 6317 on the coupon and mail it to secure the brochure.

### Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

#### No. 6311—Wood Preservative

The Carbolignum Wood Preserving Co. has just printed a new folder on its wood preservative, called by the trade name, "Carbolignum". Sections of the folder, available without charge, are devoted to, "What It Is, How to Use It, Where to Use It," and "What It Has Done." The prod-

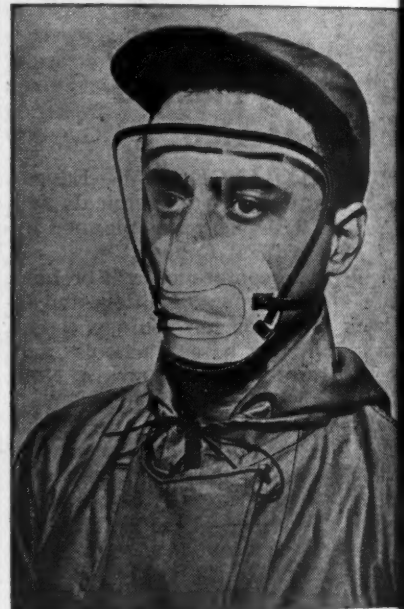
uct, according to the folder, is wood stain, wood preservative and termite stopper. No special skill or equipment is needed for application which can be accomplished by brushing, spraying or dipping, according to the folder. Check No. 6311 on the coupon and mail it to this newspaper to secure the folder.

#### No. 6304—Sprayer Finish

A new metal coating called finish "X" has been announced by the O. W. Kromer Co. for use on Kromer sprayers. The company announcement states that the finish is designed to prevent rust, corrosion and pitting of tanks and to keep sprayers from clogging. Prior to application of the finish to tanks and booms, the surfaces are sandblasted white and two coats of the product are applied, each coat being baked on at high temperatures. Further information about the finish may be secured by checking No. 6304 on the coupon and mailing it to Croplife.

#### No. 5276—Face Mask

A General Scientific Equipment Co. announcement states that its "featherweight Lumarith plastic mask and cotton gauze filter are effective for numerous light dusts and chipping hazards." It is said to protect the nose, lungs, face and eyes against nuisance



dusts, chips and particles in all types of light, non-toxic work. The filter pad consists of cotton and sanitary gauze specially treated for softness and is replaceable. Extra filters are available. For more complete information and price quotations check No. 5276 on the coupon and mail it

#### No. 6306—Fall Fertilization

A new booklet entitled, "Fertilization This Fall" has been prepared by the Spencer Chemical Co. The company notes that views on fall application of fertilizer have changed and the authorities with few qualifications endorse the fall use of nitrogen, phosphate and potash. Dealers are urged to "get into the act" and Spencer's new booklet gives some facts and figures concerning the effectiveness of fall fertilization. Secure the booklet by checking No. 6306 on the coupon and mailing it to Croplife.

#### No. 6310—Lawn Booklet

"Lawn Culture with Liquid Fertilizers" is the title of a new booklet prepared by Victor Chemical Works. Victor officials said that the booklet is designed to help the dealer develop inquiries from prospective customers and that quantity booklets, covering only the cost of printing, are available. The dealer's name

#### Send me information on the items marked:

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| <input type="checkbox"/> No. 5274—Pallet             | <input type="checkbox"/> No. 6309—Display           |
| <input type="checkbox"/> No. 5276—Face Mask          | <input type="checkbox"/> No. 6310—Lawn Booklet      |
| <input type="checkbox"/> No. 5280—Bag Closer         | <input type="checkbox"/> No. 6311—Wood Preservative |
| <input type="checkbox"/> No. 6302—Defoliation        | <input type="checkbox"/> No. 6312—Plastic Liner     |
| <input type="checkbox"/> No. 6303—Chlordane          | <input type="checkbox"/> No. 6313—Applicator        |
| <input type="checkbox"/> No. 6304—Sprayer Finish     | <input type="checkbox"/> No. 6314—Sales Aids        |
| <input type="checkbox"/> No. 6306—Fall Fertilization | <input type="checkbox"/> No. 6316—Bulletin          |
| <input type="checkbox"/> No. 6307—Couplers           | <input type="checkbox"/> No. 6315—Imprinting        |
| <input type="checkbox"/> No. 6308—Fall Fertilization | <input type="checkbox"/> No. 6317—Liming            |

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and address may be imprinted on the booklet. According to the Victor announcement concerning the booklet, any concern having tank trucks is a prospect for liquid fertilizer distribution but these firms need guidance in deciding what type of liquid fertilizer solution to offer. Secure more complete details by checking No. 6310 on the coupon and mailing it to Croplife.

### No. 6308—Fall Fertilization

A new folder, "Fall Fertilization with Vitrea," has been published by the Grand River Chemical Division, Deere & Co. The folder cites the advantages of fall fertilization: Speeds up decay of crop residues, eases the spring work load, avoids the "wet spring" problem and maintains active humus in the soil. The folder urges the customer to make up his nitrogen deficiency "with 45% nitrogen Vitrea." Included is a table showing the pounds of nitrogen needed for different kinds of crop residues. The folder is available without charge. Check No. 6308 on the coupon and mail it to Croplife to receive it.

### No. 6309—Display

Donco, Inc., has designed a 3-way, point-of-sale display featuring its liquid rat and mouse bait and liquid bait dispensers. Dealers may use the tray, containing bait packages, and the display card together or use the card and tray separately. The card has an easel for setting up on counters and in windows. Secure more complete details by checking No. 6309 on the coupon and mailing it to this publication.

### No. 6307—Couplers

James-Pond-Clark announces its new line of couplers for nitrogen solutions service designed for "rapid handling of nitrogen solutions safely and economically." The firm's "Circle Seal" couplers are claimed to provide high speed filling of tanks from top to bottom. Solutions can be transferred and maintained under pressure and loss of ammonia vapor is prevented, it is claimed. The coupler arrangement consists of a filler valve that is threaded into the tank and a coupler for quick connection between the hose and the filler valve. The filler valve incorporates a check valve unit to permit flow into the tank and automatically shuts off when the coupler is disconnected. Secure more complete details by checking No. 6307 on the coupon and mailing it to Croplife.

### No. 6302—Cotton Defoliation

The National Cotton Council has published a leaflet entitled, "Chemical Defoliation of Cotton—1955 Progress Report." The leaflet is intended to bring the basic defoliation guide first published in 1953 up-to-date by adding an analysis of the newest developments in use of harvest-aid chemicals for cotton. Among the topics discussed in the leaflet are amino triazole, defoliation vs. desiccation, defoliation following irrigation, boll rots and a chart of the various chemicals in use, together with the manufacturers' names and recommended usage. Secure the leaflet by checking No. 6302 on the coupon and mailing it to Croplife.

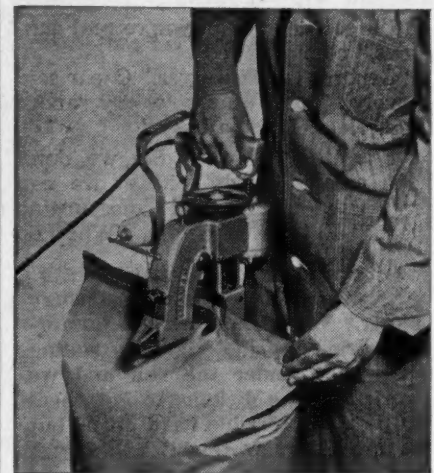
### No. 5274—Pallet

The Bakelite Co., division of Union Carbide & Carbon Corp., has announced a new type of materials handling pallet weighing 28 lb. and molded of Bakelite polyester resins reinforced with Fiberglas to support 1000 lb. of working load. Claimed to be resistant to oils, grease, acids and alkalis, the pallet has a surface that

is easy to keep clean and sanitary by steam sterilizing at temperatures up to 325° F. Nine hollow legs molded in one strong piece with the platform they support are spaced to allow a four-way approach for fork lift trucks. Nested together in the hollow legs, 100 of these pallets stack up to a height of only 7 ft. 8 in., and occupy only 102 cu. ft. of storage space. Secure more complete details by checking No. 5274 on the coupon and mailing it.

### No. 5280—Portable Bag Closer

The Dave Fischbein Co. has announced a new model portable bag closer and claims that its versatility will allow it to close bags ranging from the lightest to the heaviest textile or paper bag, whether asphalt treated or specially processed, with no change in parts or adjustments. The machine is electrically powered by a 1/12 h.p. motor and weighs 10½ lb., including full cone of thread.



The new model is a refinement of the former model, the company announcement states. The bag closer is said to sew 40 ft. a minute, is light enough to carry with one hand and a light touch on the starting button puts it into action. The unit can also be adapted for stationary use. A suspension unit is provided and a counterweight holds the machine at any desired height. Secure more complete details by checking No. 5280 on the coupon and mailing it.

### No. 6303—Chlordane

Chlordane promotion material in the form of consumer booklets is available from the Velsicol Corp., Division of Arvey Corp. One is a 12-page booklet on garden insect control and another is a 16-page booklet on household insect control. Samples are available without charge. The backs of the booklets are blank for imprinting of a sales message. Secure more complete details by checking No. 6303 on the coupon and mailing it to Croplife.

### Nitrogen Grows Bigger Crops in Idaho

MARSING, IDAHO—Nitrogen grows bigger crops in Owyhee County, Idaho. J. V. Briggs, Owyhee County extension agent, and J. W. Barber, University of Idaho specialist in measuring results of extension programs, report that use of fertilizer has improved yields on the Owyhee Irrigation project.

More farmers are applying commercial fertilizer and growing alfalfa and sweet clover for green manure than there were in 1948, the first year covered in a survey. The farmers said they adopted the practices because they paid.

### SUPPLY FIRM BURNED

LANCASTER, KY. — Marksbury Farm Supply House here was destroyed recently in a fire which raged through a number of business places.

## What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

Southern Nitrogen Co., Inc., a newly organized firm, announced it would build a \$14 million nitrogen plant at Savannah, Ga. Officers of the company include Malcolm Smith, chairman of the board, John R. Riley, president, and George V. Taylor, vice president.

Western States Chemical Corp. will begin manufacture of complete pelleted fertilizers in a new plant now under construction at Nichols, Cal. The company has been organized as a subsidiary jointly owned by Pacific Guano Co., Berkeley, Cal., Triangle Company of Central California, Salinas, Cal., and Wilbur-Ellis Co., San Francisco.

Monsanto Chemical Co., St. Louis, announced a special sales staff within its Organic Chemicals Division to market farm chemicals which the company will market for the first time under its own label in 15 Midwest states. Charles P. Zorsch, associate manager of the division's Agricultural Chemicals Dept., heads up the new farm chemicals section within his department.

National Agricultural Chemicals Assn. registrants for the group's meeting at Spring Lake, N.J., were told that more industry statistics and market facts are needed. W. W. Allen, reelected president of the association, said that it will may take 100% more chemicals to produce the 40% more food that the U.S. will require to feed its expanding population in the next 20 years.

A formal safety educational program for customers of the pesticide industry was proposed at the National Agricultural Chemicals Assn. meeting at Spring Lake, N.J. . . . Government researchers, through their constant tests, can prove the effectiveness of agricultural chemicals, thereby creating new demands and stimulating production, NAC registrants were told.

USDA studies revealed that granular-type insecticides show promise toward control of European corn borer, and at the same time present less of a residue problem than do other kinds. . . . The greatest potential for both pesticide and fertilizer sales lies in the north central states, USDA studies indicated. This area produces a major portion of nation's agricultural output.

Flood damage in the northeastern states was calculated in billions. Hurricane "Diane" brought winds and rains that ruined crops, killed livestock and devastated whole areas of New England. Flood insurance was reported to be practically non-existent, thus adding to the difficulties of both farmers and businessmen. . . . A European chafer quarantine was applied to include parts of Connecticut, New York and West Virginia. . . . Grace Chemical Co. named John B. Pitner as head of its Agricultural Service Dept.

Velsicol Corp., Chicago, named C. E. Campbell as its representative in the Washington, D.C. area. . . . Pacific Coast Borax Co. named two additional salesmen: J. S. Gowland and Elmer H. Schmierer. . . . E. I. duPont de Nemours & Co. of Canada also announced sales appointments. Merle E. Ward moves from Montreal to Toronto; L. A. O'Neil, from Ontario to Alberta and British Columbia; and G. H. S. Malcolmson moves from Alberta to London, Ont. One new representative was appointed: A. A. Appleton who will operate in Eastern Ontario and Quebec.

According to a report by the U.S. Bureau of Mines, the phosphate industry faces a good future in both demand and output potentials. A continual rise in use has been noted for many years. . . . The American Society of Agronomy met at Davis, Calif., Aug. 15-19 and heard many papers on crops and soils research. New president elected was Dr. Iver Johnson, Iowa State College.

Davison Chemical Corp. announced that it would take over the manufacturing work of A. F. Pringle & Co., Charleston, S.C. . . . Alabama By-Products Corp. appointed O. A. Graft as service and sales engineer at Birmingham. . . . Richard M. Young, Jr., became assistant sales manager of Ultra Chemical Works, Inc., Paterson, N.J.

U.S. Rubber Company's Naugatuck (Conn.) plant was damaged in recent floods, but the company announced that it had stocks on hand for immediate deliveries. . . . Fertilizer sales in California showed an increase of 21,000 tons in the second quarter of 1955. Sales during April, May and June, this year, totaled 320,702 tons. . . . Korea received authorization for \$9 million for fertilizer materials. Grant was made by the International Cooperation Administration. Sources of the material will be world-wide.

Don Paarlberg, USDA economist, took initiative to refute talk about a "farm depression." In a speech made in New England, he brought out facts and figures indicating that farmers are not slipping in net income.

U.S. Department of Commerce reports that the farm chemical industry is in good condition, based on relatively low inventories in the face of record production. . . . Two phosphate plants, those of Virginia-Carolina Chemical Co. and Armour Fertilizer Works, reopened at Lakeland, Fla., following settlement of wage dispute which had closed the operations since June 1.

Diamond Black Leaf Co. moved to Cleveland, Ohio, from former office in Richmond, Va. . . . McLaughlin Gormley King Co., Minneapolis, announced the opening of a New York office as part of its expansion program. Nathan D. Froot will head the branch.

Russell B. Stoddard and R. H. F. Dade were named to new positions by Food Machinery and Chemical Corp. Both are associated with the Fairfield Chemical Division. . . . Phytopath group and Ohio Pesticide Institute met at Wooster, Ohio for three-day meeting. . . . H. H. Allen, retired executive of Bemis Bro. Bag Co., died Aug. 13; and Dr. William Hale, farm chemistry exponent and formerly Dow Chemical Co. executive, died Aug. 8.





It was the first of the month, and Tillie, the plump bookkeeper, had just placed a copy of the monthly statement on Pat's desk and also on Oscar's. The desks of the two partners were back to back in the railed area separating the office from the store, so that they faced each other.

Now both men studied the monthly statement intently, the lanky, blue eyed, bushy haired Irishman, and the stolid, neatly dressed partly bald, rotund German. And the expressions on their faces were different.

On Pat McGillicuddy's countenance, there was a pleased grin. Oscar's face was darkly frowning, as he tapped one of his eight finely sharpened pencils on the glass top of his desk. A fierce bulldog-shaped paper clip receptacle stood near his letter box, and a large glass bowl was half filled with rubber bands. The paper clips and rubber bands Oscar always retrieved from discarded correspondence.

"Why, Oscar," grinned Pat happily, "this is a fine report. We're about 7% ahead of sales over the same time last year. And we've got this fall fertilizer season just ahead. I'll bet we'll even exceed the gain at the end of the year."

"Ach!" snapped Oscar. "It's a lousy report. Absolutely lousy."

An intense silence settled over the office as the two men looked at each other. Tillie, the ulcerish inclined bookkeeper, reached for an ulcer powder, which she always did when the partners squared off for battle.

"Lousy!" repeated Pat puzzledly. "What do you mean? I know we don't talk the same language on lots of things, but this report is plain for

## NEW MEXICO DEALER

(Continued from page 9)

anything they want without charge. If a man has a second-hand fertilizer spreader for sale, he lists it on the blackboard. Sometimes an irrigation laborer needs a job. If so, he can state his case on the blackboard. When people come to the store, the first thing they look for is that announcement board.

"It's almost like a small town newspaper," Mr. Slaughter smiled.

Mr. Slaughter realizes that farming has gone scientific. For this reason he works with the county agricultural agents, pumps questions at the scientists sent out by the chemical companies, and tries to stay abreast of the latest developments.

"One thing I believe," he said, "is that the storekeeper of the future won't have a little hole-in-the-wall place. It will be departmentalized, with employees who know their merchandise and the best ways to sell it.

"Farm chemicals are becoming more important every year. The man who haphazardly tries to sell them soon will be out of business.

"To keep that from happening to me, I'm planning my business step by step. There is a big future in this thing, and I want to be in on it."

anybody to read. Seven per cent is seven per cent."

Oscar snorted. "Sure it is. But take a look at the net profit percentage at the bottom of the page. We've slipped another half per cent since July 1. Did you ever hear of a business man working for nothing? Well, that's us. If this keeps up we'll be out on the street with empty pockets."

Pat's enthusiasm cooled considerably. He studied the profit percentage for a moment, then said, "How can that be? We've certainly been selling a lot of merchandise. I thought—"

"Huh," broke in Oscar. "Our expenses have been going up, that's what. That's why our profit percentage is smaller. Those expenses come out of our margin, and we can't raise our selling prices. We're caught in the middle. If you—"

"If I what?" asked Pat quietly. "If you didn't spend so much money all the time, if you'd listen to me and cut expenses, maybe we'd have a better profit percentage. I've been trying to hammer that into your noodle all these years—but it's no use."

Pat's lean face began to get flushed. "Sure, and begorra, if you wouldn't spend so much time fiddlin' with those sharp pencils and would get out and sell more, then maybe we'd make more money, too."

Oscar choked. "Sell? You sell too much now that we can't collect for within 90 days. You keep me busy just tryin' to get that money in. Sell only good accounts—that's what we should do. And no discounts."

"But you like discounts, and so do farmers," snapped Pat, his gentleness vanishing. "You're always figuring where we can get discounts."

"Ach," said Oscar with a broad smile, as if Pat had fallen into his trap. "Sure, I figure discounts. And it is a good thing I do, for we'd be out of business if I didn't. And it's an established business practice for a dealer to take discounts, but it ain't business practice to let customers chisel on prices."

"Oh, we'd still be in business if you missed some of those discounts," Pat said stubbornly. "I know that if we don't make the sales, then there won't be any money to collect to pay our bills."

"Let me tell you something," Oscar said sharply, taking a pencil and a pad of paper. "All manufacturers don't let us discount, but many do, and if I discount \$5,000 in bills every month, look what I save—for us."

"\$100," said Pat.

"Sure," said Oscar, "and how can one save \$100 any easier."

"But you don't have to spend all your time at it!" Pat said, straight from the shoulder. "You get more salary than \$100."

Oscar swallowed hard. "Listen, Irisher," he thundered, "I do lots of things around here besides that. I keep us from making bum deals, I see that you get after delinquent accounts and get money in. Do you know that a 2% discount on bills every month amounts to 24% discount a year?"

Pat McGillicuddy stared at Oscar.

"I—I hadn't looked at it that way," he admitted. "That's a big discount."

"It sure is," smiled Oscar triumphantly. "Even when a manufacturer has no monthly 2% discount, I take it anyway. I pay right on the first of the month, and they like that. If they write me about the discount, I don't answer. Why should I? They get their money fast. It's worth 2% to them. After awhile they get tired of writing me and give me the discount without kicking."

"I'll bet they think you're real generous," commented Pat.

"Generous for us—yes," Oscar said sharply. "Let others worry about themselves. I'm too busy."

"But suppose some day we don't have enough goods sold so we can pay our bills, even discounting them?" Pat asked curtly. "What do we do then?"

"That we don't have to worry about," Oscar said with a humorless grin. "You go right on selling everybody under the sun and we work like the dickens to get them to pay. It's terrible hard on us but so far it has worked."

This made Pat smile a little. "I think both of us have learned something about each other's work from this discussion, Oscar. Let us hope that both of us keep these things in mind from now on."

Oscar said nothing, but he wanted to. "Learned something?" he thought. "I knew all this a long time ago. It's you, Pat, who is just waking up, ach!"

## ACP PAYMENTS

(Continued from page 9)

with the local conservation problems. Thus the most effective use of ACP funds is attained.

"Avoidance of wind erosion in the Great Plains depends largely on the amount of land cover. Adequate moisture will insure this vegetative cover.

"Cost-sharing is offered for terraces, contouring, subsolling, strip cropping and similar moisture conserving practices. Water holding and management structures are of particular importance in the Great Plains."

Mr. Peterson pointed to the provision in the ACP which permits the payment of cost shares on completed components of practices. This provision is of special value in the Great Plains in seeding erosive cropland to permanent vegetative cover. Grasses, he said, will not grow readily unless the seed bed has been settled and stabilized.

To successfully establish native or improved pasture grasses, cover crops must first be planted. This provides ground cover, resists wind erosion, holds winter snow and provides a firm seed bed for seeding grasses the next year. Costs may be shared therefore, in developing the cover crop in one season and for the seedings in the subsequent year.

During 1955 special funds were appropriated by Congress to help meet the cost of emergency tillage operations.

## OVER THE COUNTER

(Continued from page 9)

be given intensive training in managerial techniques.

There is one interesting reason why GE says it has come to start its own managerial school. The reason is this: No one is born a smart manager. He has to be taught and learn how to become a good manager. Says the head of GE's management consultant service: "No longer is it true, in our seasoned judgment, that experience alone can teach the work of managing adequately and in time."

GE is not alone in the belief that managers—and dealers—should be taught management methods. The proof can be found in the spread of short courses for businessmen among the nation's colleges. Fertilizer dealer short courses are now established annual events at most agricultural colleges. No matter the distance, every fertilizer dealer owes it to himself, as well as to the customer, to attend these fertilizer schools whether they are offered by his own state college, that of his neighboring state or by his supplier.

## Background for Dealers

For a long time individuals who felt they had sufficient experience in the retail business became dealers feeling that they had mastered enough phases to assure them success. This is, of course, an ideal background for any dealer and will always continue to be. Experience shows, however, that every star fertilizer salesman or store employee does not become a successful dealer. Many do, but it is recognized that in the field of managing a successful farm supply store or fertilizer dealership, it is important to be well grounded in general management principles instead of being a specialist in just one phase of an operation.

A dealer schooled in general management principles can assign to and develop employees, in the specialist skills. When a dealer allows himself to be on call for every technical question, he will not have much time left to think, judge and decide, or to get results through his employees.

A dealer must learn how to use such management tools as planning his operation, organizing it into a "team," directing it, coordinating jobs and controlling them. Further, he should allot himself time to study his management responsibilities whether they be taught in his trade papers, by his supplier, his agricultural college publications or at short courses.

## 50 Attend Bindweed Control Demonstration

LUBBOCK, TEXAS—More than 50 farmers and agricultural officials from this area attended a recent bindweed eradication demonstration on the Dale Littlejohn farm. The demonstration was in charge of Fred Doherty, whose company furnishes the weed control chemical, Karmex W.

Before the demonstration, Dave Sherrill, Lubbock County agricultural agent, told the group that bindweed were hard to kill once they were well established. He said that in areas of infestation of bindweed had reduced land values as much as \$100 per acre and fields had been abandoned because of it. Mr. Doherty's demonstration was made with a hand-operated spray on the bed of a pick-up truck.

## THE BUS

Right now farmers are buying eggs in millions of range. Each female is approximately 200 from 10 to 12 square yard of land only takes 63 per acre a day as a standard, entomologist New Mexico College of Mechanic Arts.

## Farmers Call To Follow On Pesticide

SACRAMENTO—The department of agriculture has issued a warning on the labels of food crops.

Allen B. Lemmon, department's Bureau of Entomology and Plant Quarantine, said that much time in the labels. The labels reflect the coordinated efforts of entomologists, chemists and other scientists. The department's Bureau of Entomology and Plant Quarantine, said that much time in the labels. The labels reflect the coordinated efforts of entomologists, chemists and other scientists.

1. Not to use... 2. Not to rep... 3. Not to app... to harvest than... label.

## Fertilizer R... and Pays

SACRAMENTO—The district report that the district range land ends.

District chairman and district coordinator that fertility 7.5 lb. lamb variable adjacent and produced the value of the unfertilized compared with the fertilized range.

Last year M... range produced... the unfertilized range said this... unfertilized range.

## Pesticide H... Held in Cal

SACRAMENTO—Changes in state use of injurious insects discussed at a meeting, held by the department of agriculture. Allen B. Lemmon, department's Bureau of Entomology and Plant Quarantine, said that much time in the labels. The labels reflect the coordinated efforts of entomologists, chemists and other scientists.



## THE BUSY HOPPER

Right now female grasshoppers are laying eggs in more than two million acres of range land in New Mexico. Each female is capable of laying approximately 200 eggs, and there are from 10 to 100 females on every square yard of the infested acreage. It only takes 62 'hoppers per square yard per acre to eat as much grass as a steer eats.—John Durbin, entomologist, Extension Service, New Mexico College of Agriculture & Mechanic Arts.

## Farmers Cautioned To Follow Directions On Pesticide Labels

SACRAMENTO — The California Department of Agriculture has cautioned farmers to follow directions on the labels of pesticides they apply to food crops.

Allen B. Lemmon, chief of the Department's Bureau of Chemistry, explained that manufacturers spend much time in preparation of their labels. The label on a pesticide reflects the coordinated work of entomologists, chemists, toxicologists and other scientifically trained men and women. The directions for use and the precautions have been carefully worded and presented to provide the user with clear instructions as to how the material should be handled.

Farmers were particularly cautioned:

1. Not to use more concentrated sprays or heavier dosages of pesticides than recommended.
2. Not to repeat applications more often than recommended on the label.
3. Not to apply at any time closer to harvest than recommended on the label.

## Fertilizer Range Land Pays Dividends

SACRAMENTO — Officials of the (Cal.) Soil Conservation District report that fertilization of District range lands again paid dividends.

District chairman Lynn Raymond and district cooperator Leon Williams say that fertilized range produced 7.52 lb. lamb per acre while comparable adjacent unfertilized range produced only 5.8 lb. per acre. The value of the lamb gain per acre on the unfertilized range was \$1.22 compared with \$12.08 on the fertilized range.

Last year Mr. Williams' fertilized range produced \$28.57 of lamb per acre, the unfertilized \$2.61. Mr. Raymond said this indicated that even during unfavorable spring seasons the fertilized range produced about ten times the amount of lamb as did the unfertilized.

## Pesticide Hearings Held in California

SACRAMENTO — Proposed changes in state regulations governing use of injurious weed killers and other injurious pesticides are being discussed at public hearings this month, held by the California Department of Agriculture.

Allen B. Lemmon, chief of the department's Bureau of Chemistry, said the proposed changes reflect recent developments in agricultural chemicals and implement a law passed by the recent legislature which requires signed statement to be obtained from dealers from purchasers before selling certain injurious agricultural chemicals.

## Texas Prison Farm Produces Three Bales Of Cotton Per Acre

BRAZORIA, TEXAS — The Clements unit of the Texas Prison System this year in producing three bales of cotton per acre on 170.5 dryland acres.

Preparations for the bumper crop were begun in July, 1954, according to Warden L. G. Bounds. They had the land flat broke, then bedded, and fertilized with 200 lb. 0-20-0 per acre. Later it was chiseled, rebedded and finally row disked.

The cotton was planted on black river bottom land and averaged 3.8 plants per foot on 3.5 foot rows. Just before planting time an application of 75 lb. anhydrous ammonia was used. The first planting was lost to a freeze, but the second one came up the last of March.

The crop fell prey to hordes of insects, but strict insect control recommended by Texas A&M College kept damage down to a minimum. When cotton reached the four leaf stage, toxaphene was applied at seven day intervals. After fruiting began, flea-hopper control was necessary, using toxaphene-DDT and BHC-DDT for two applications five days apart. The final dusting of the flea-hopper insecticides was applied to stop an outbreak of boll worms.

The warden says the insect control program had much to do with the high crop yield.

## New Mexico Farmers Feel Water Squeeze

HATCH, N.M. — Farmers in the Rio Grande recently got their last irrigation water from the river. It amounted to .6 inch per acre and ran the season's total to only 4.5 inches.

This figures only about one good application, according to Sierra County Agent, Allan Beck. The rest of the year's water must come from irrigation wells.

At one time there was plenty of river water for all farmers, but the squeeze has become tighter the last few years. This year there was more than normal snowfall and rain on the upper watersheds of the river, yet the amount used for irrigation was only about 20% as much as needed.

"One reason for this," said Mr. Beck, "is that thousands of acres of land have been put into cultivation the last ten years. Also, farmers are using more water than ever, and more water-requiring crops are being grown. I doubt if there is ever enough water in the river again to irrigate all the land."

Mr. Beck says the wells near here are pumping good water, but farther down the river many of them are salty. This salty water is ruining the land, and this year several thousand acres are lying fallow.

## CONSERVATION PROGRESS

STATE COLLEGE, N.M.—Reports from New Mexico's 61 soil conservation districts show that conservation accomplishments for the fiscal year ending July 1, have increased considerably over the previous year. The 61 districts cover approximately 76% of the total area of the state. Among the major accomplishments in the districts was the addition of 751 new cooperators, totaling 1,855,061 acres. At present there are 12,217 farmers and ranchers, with over 26,000,000 acres of land, cooperating with the districts. Soil Conservation Service technicians have completed conservation plans on 9,377 district cooperators' farms and ranches to date, with a total of 20,830,246 acres.

# Better Selling

Richer Sales Fields for Dealers



## RINGING THE cash register

### Merchandising Hints for The Retailer

#### Gift at Christmas

Purchases totalling \$100 or more during the course of 1955 will be rewarded by one dealer with a gift of a popular-line toaster at Christmas time. The dealer writes each of his customers early in the year, outlining his promotion and the offer of a free toaster just before Christmas. For those who may become customers later in the year, he has other gifts. For example, purchases totaling \$50 or more after June 1 of the year, will entitle the customer to a coffee percolator. The dealer suggests that such a promotion be announced in late December or early January so as to give the customer a time advantage.

#### Steady Customers



One feed dealer has taken advantage of a sudden surge in bowling activity in his community. The dealer offers two tickets good for two games—with instructions provided if desired—with a feed purchase of \$12.50 or over. The dealer notes that bowling has gained favor with farmers and ranchers as well as urban residents and with his ticket plan has practically "sewed" up bowling enthusiasts in his trade area with his offer of free tickets.

#### Staging a B-E Day

Participating in a business-education day has become an annual event for many firms. The experiences of many participating firms have been compiled into a guide by the Super Market Institute. The guide lists what to do and how to execute a successful B-E day. Two planning meetings, the first to supply the plan and tentative schedule to all key personnel, the second to review and revise the plan and schedule, are recommended. A firm schedule, with definite assignments, even to include who is to say what, is urged. A dress rehearsal should be staged about two days before B-E day. Other items to be checked are: preparation of a luncheon or dinner, transportation, publicity (advance, on the spot and report of the actual event), notification of all employees, welcome sign, identification badge, morning and afternoon snacks, rest periods, pencil and paper for notes, visual aids, questions and answers and a souvenir. The company head should send out personal invitations and act as a host when delegations arrive. Following B-E day he or a representative should pay a return visit to the school or schools.

#### Mail Orders

One farm supply dealer supplements his outside selling program by sending out announcements of specials timed so as to reach his customers several days before delivery day. A return order card is enclosed with the announcement, giving customers a chance to send in orders. Many extra orders come in from these announcements of bargains and special items and it is possible for the delivery truck to take the merchandise along when the regular run is made.

#### Orders By Mail



One farm supply dealer is making profitable use of the humble post card. Every customer is handed a post card addressed to the store. The customer takes it home and whenever he is in need of feeds, fertilizer, tools, or any of the other products handled by the store he writes it on the post card and mails it. Delivery is then made promptly by the route man on his next regular round. Many post card orders are claimed by the dealer, who cites that the customer is given a real time and money saving in not having to drive to town and do his ordering.

#### Balloon Stunt

Dealers planning a sale may want to consider a balloon stunt which has worked successfully for a number of retailers. Here is how the stunt operates: Several hundred balloons are stuffed with slips which are good for various kinds of prizes. The balloons are then blown up and suspended from the ceiling over the checkstands. If the customer makes a purchase of \$5 or more he or she is entitled to an opportunity to break a balloon and obtain whatever prize the slip inside calls for.



*if your product is marketed  
through distributors and dealers ...*

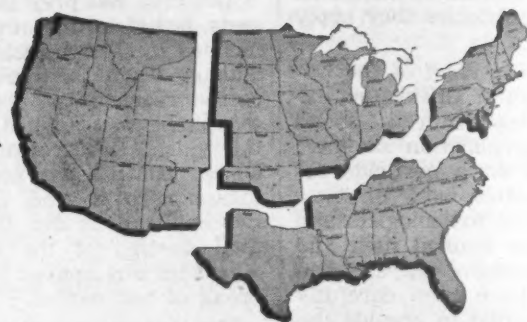
# Croplife is for YOU!

**AN IMPORTANT EXCLUSIVE** is available to advertisers whose agricultural chemical products are marketed through distributors and dealers. It is Croplife's unique *regional crop-area circulation plan*, carefully developed to fill an urgent need in the industry's marketing and advertising facilities—the need of advertisers to reach the dealers and distributors and farm advisers with an up-to-date story of their products and their consumer promotion plans.

**THIS IS THE PLAN:** In addition to the weekly circulation to manufacturers and formulators, Croplife is distributed on a regional crop-area basis to the dealer-distributor-farm adviser segment of the industry. The merchandising section in each issue of Croplife is specifically edited for dealers in one specific region. This carefully planned editorial formula insures intense reader interest.

More than 11,000 DEALERS, 1,700 custom operators and 1,000 farm advisers receive the issue of Croplife specifically edited for their regional crop-area once each four weeks. The mailing schedule for this group covers consecutively four geographic regions of the United States (see map) with one of four regional dealer issues: The Northeast Dealer Issue, the South Dealer Issue, the Midwest Dealer Issue or the West Dealer Issue. Each week Croplife goes to more than 3,500 dealers, distributors and farm advisers in one of these four regional crop-areas.

**THIS CIRCULATION EXCLUSIVE** is available only through Croplife. The regional crop-area circulation to dealers has been carefully developed to fit the particular needs of the agricultural chemical industry. Many individual products have been developed and approved and are being sold for use on a specific crop; therefore, marketing and promotion plans must be directed specifically to the appropriate crop-area. Croplife's dealer circula-



In addition to its national coverage, Croplife offers a selective regional circulation plan in these crop-areas

tion developed along crop-area lines offers advertisers the *most flexible medium possible*, designed to give "direct-hit" coverage for specific messages without the higher cost of a larger-than-necessary circulation on an inflexible nationwide basis. Advertisers interested in reaching dealers in more than one region can do so easily and economically with a selective advertising schedule.

**HOW TO USE THE PLAN:** Select the regional crop-areas—Northeast, South, Midwest or West—in which you need to reach dealers, distributors and farm advisers with the up-to-date story of your products and your consumer promotion plans. Plan your message to inform and to educate this group. Then, select the appropriate issues of Croplife to carry your advertisements. Croplife's printed circulation statement outlines the four regional crop-areas in detail and gives the issue-by-issue mailing schedule. Ask us for a copy.

## AND SOON—4000 additional selected dealers will be added!

**BEGINNING IN JANUARY** this important circulation exclusive becomes even more valuable to advertisers who are reaching dealers through the pages of Croplife. An additional 4,000 selected dealers handling agricultural chemicals will be receiving the issues of Croplife edited specifically for their crop-areas. One thousand dealers in each regional area have been screened and verified and will be added to Croplife's controlled circulation

plan, bringing the total number of dealers, distributors and farm advisers receiving Croplife to more than 18,000. Each week Croplife will go to more than 4,500 of these interested readers in one of the four regional crop-areas.

**MAKE YOUR PLANS NOW** to capitalize on this unique advertising opportunity, exclusively through the pages of Croplife.

WRITE-WIRE-PHONE for the full story of your advertising opportunity in

# Croplife...for richer<sup>sales</sup> fields

New York, 114 E. 40th St.  
Murray Hill 3-3768  
Minneapolis, 2501 Wayzata Boulevard  
Main 0575

Published Weekly by  
Miller Publishing Company  
at Minneapolis  
Issued Monday. Advertising Forms  
Close 14 Days Preceding

Chicago, 2272 Board of Trade Bldg.  
Harrison 7-6782  
Kansas City, 614 Board of Trade Bldg.  
Victor 1350

WASHINGTON

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# Administration Not Expected To Depart From Basic Farm Plan Goals of Ezra Taft Benson

By JOHN CIPPERLY

Croplife Washington Correspondent

WASHINGTON — Notwithstanding the flank attacks by political mercenaries, the Ezra Taft Benson administration does not plan to depart from the basic farm goals set forth by the secretary, and it is not going to adopt in whole or with variations a land lease or rental program to get land out of field crop cultivation.

That statement of policy was given to Croplife last week by top advisers of Mr. Benson.

At the same time it was admitted that in seeking the ultimate objective of a balanced system of a free farm economy the administration, probably in view of the heavy surpluses of grains and cotton, will have to tuck in its course and modify immediate objectives.

Refusal to modify goals to meet exigencies might bring about a defeat for the Benson program, since political issues always raise more heat than light. Consequently it may be expected that the administration will qualify its immediate goals to maintain the farm community in an equilibrium which will check further decline in farm income and turn back the inspired attacks now being launched broadside upon the secretary.

Essentially, the Benson program has done nothing to warrant the extremist attacks on the secretary. He is charged with leading the farmer to ruin through the flexible price support program.

The facts and record are something different.

The flexible price support program was adopted by the last Democratic Congress and previously had been openly advocated by former president Harry Truman.

Mr. Benson inherited two years of operation under the rigid high price support program of 90% of parity for the basic commodities—corn, wheat, cotton, tobacco, rice and peanuts. The flexible price support system will take effect starting Jan. 1, 1956, for crops planted in that year.

It seems somewhat absurd to charge that Mr. Benson's flexible support program is responsible for the farm price slide that started under the Brannan regime here and accelerated well before Mr. Benson took office. The failure of the then secretary, Charles F. Brannan, to impose acreage controls over cotton and wheat resulted in an accelerating pile-up of those two commodities which now is affecting the entire farm community and dragging down other commodities under that weight.

A closer examination of the facts reveals that where the secretary had discretionary power, as in the dairy price support program, he acted to lower the level of price support. The result was that, at a lower level of parity support, the dairy industry has pulled itself out of a dismal situation. Now, according to reliable reports from the dairy states, the dairy farmer is in reasonably good profit condition.

The market price of feed grains has been steadily on the down swing. Last year's corn crop has been consistently marketed at between 20-30¢ below the loan level at country points, while the support level was 90% of parity. It is difficult to see how Mr. Benson has been responsible for that condition. Farmers themselves have been unwilling to enter the 90% of

parity corn loan program, according to official figures.

For the present corn crop year approximately 650 million bushels of corn were eligible for price support yet only 250 million entered the government loan program. Yet at the same time country prices for corn were, as noted above, 20-30¢ below the loan level available.

Low priced corn has brought about a big expansion of hog production as ordinarily might be expected after the swine producers had a very profitable year in 1954. Corn was cheap and pork prices were good.

Now, however, the pendulum in the hog economy appears to have swung widely the other way—at least according to transient conditions which will be commented upon subsequently.

There are strong indications that the feed grain price level has touched or is reaching bottom. This means that with heavier than last year marketing of hogs there might be a further slump in hog prices.

To meet that situation for the benefit of the farm community as a whole—here is where Mr. Benson may be required to modify his original and ultimate goals and institute a pork buying program this year if hog prices slump badly. Thus far hog prices are far from the bankruptcy level the politicians are forecasting.

Current price levels for hogs averaging better than \$16 cwt. are profitable for competent hog producers. Even at \$14 with corn at current levels the good hog farmer can make money.

But with indications that feed prices are touching bottom and higher levels are in sight the existing favorable price relationship between hogs and corn may shrink.

It is at this point that Mr. Benson is prepared to act. He will—according to his top advisers—take a hand in the hog marketing situation when feed relationships reach a point where the hog farmer goes into the red and will start a pork buying program for distribution of school lunches and relief. It may be expected that as much as 100 million dollars will be made available to keep the hog economy of the corn belt on a profitable keel.

Other expedients may be adopted as conditions present themselves. But these expedients do not contemplate any vast land leasing or renting scheme to take land out of field crop production.

These plans have been talked over and over again at USDA for many years—even under the Democratic regimes where it was then sensed that the high price support program ended only in a sheer precipitous drop when supplies mounted to the size which Mr. Benson inherited.

It is pointed out by USDA analysts that removal of land from field crop production is a highly desirable thing if it leads to a better balance in the entire national farm economy. But it is not a practical remedy through leasing, renting or buying of land by the federal government.

The land which the soil use economists recommend for removal from field crop cultivation is the fringe and marginal land where only a relatively small part of the entire crop production comes from. If the land rental-lease schemes were to be made effective they would have to be applied to the most productive and fertile lands of the Corn Belt.

Put small faith in any reports, no

matter how insistent or repeated, that the Benson administration will deviate from goals to that extent.

On the other hand, to aid the small farmers it may be expected that further aid will be made available through agricultural conservation payments which should ultimately lead to the reduction of cultivation of fringe land which under few circumstances in its present condition can make for profitable farming operations.

Other constructive measures to aid small farmers may be credit aid which will permit the accumulation of large acreage to allow the use of modern farm machinery and plant foods and pesticides on an increasing scale.

No one at USDA has said so in so many words but it is becoming clear to any farm community observer that the farmer has already learned how to produce on a high level scale but he has yet to modify his productivity level to reduce his costs per unit.

That is the equation for which Mr. Benson seeks. He may make many detours in his drive for the farm economy balance he seeks during the coming year.

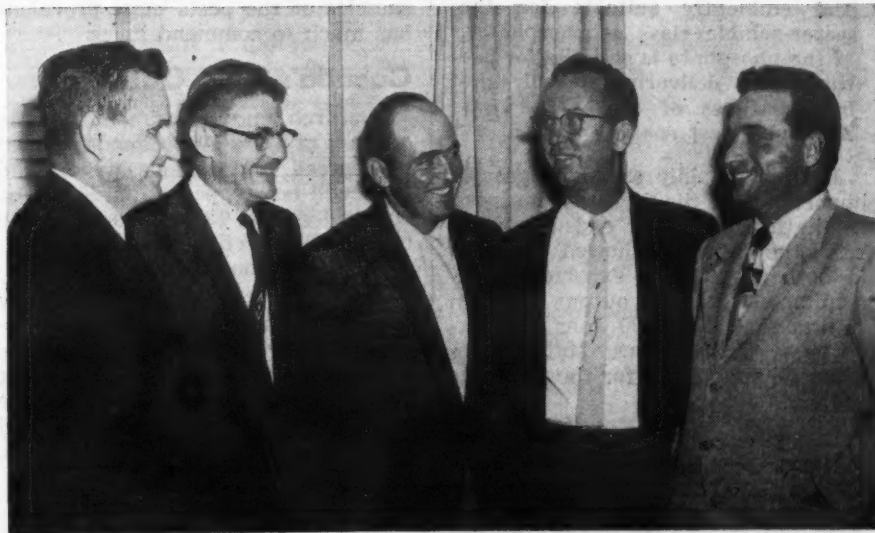
It is pointed out in political circles that unless he does make some concessions, the onslaught of the political mercenaries may drum up a farmer panic through repeated wolf cries of farm depression.

At this time it is important for the plant food and pesticide industries to look behind the political attacks. These attacks have gained wide currency from Washington where news values are low or non-existent. The press corps here appears to be grabbing at every straw and the shrewd Benson opponents have seized on an ideal occasion to launch their campaign.

Their strategy may have been sound but their tactics seem uncertain.

Reliable reports from independent crop reporters reaching here indicate that the bountiful feed grain crops promised in the Aug. 1 crop report have already been greatly discounted. These same reporters now say that the 1955 corn crop may not exceed that of 1954, when production for grain reached approximately 2.65 billion bushels. Similar reports are coming in for barley and grain sorghums.

The drive on the farm price situation may have misfired when the last crop returns are in. All signs point now to a firming up of the feed grain price structure, and a few adjustments in the Benson program may rob the attackers of most of their zeal.



**IRRIGATION MEETING**—Does supplemental irrigation really pay off? Olin Mathieson Chemical Corp. got the answer directly from the experts at a recent national sales meeting of its irrigation representatives at Little Rock, Ark., Sept. 13-16. Three farmers who have used irrigation successfully reported their results. Don Bezy of Sullivan, Ind., told the meeting he made 130 bu. corn per acre on a test plot in 1954. Riley Allen of Blackshear, Ga., reported 3,100 lb. tobacco per acre versus the state average of 1,200 lb. J. W. Pruett of Inverness, Miss., several times the winner of the Mississippi five-acre cotton contest, has yields ranging above four bales per acre. Left to right, above, are Dr. G. G. Williams, manager of irrigation research for Olin Mathieson, Thomas W. Crockett, director of the irrigation department, and Mr. Bezy, Mr. Allen and Mr. Pruett.

## ACS MEETING

(Continued from page 8)

determinations at regular ten day intervals. The materials persisted on the foliage for more than thirty days in most cases, the paper said.

Similar tests on alfalfa were made with toxaphene, chlordane, DDT, methoxychlor, lindane, aldrin, dieldrin, heptachlor, and endrin. After from three to ten days, the hay was cut, field cured, baled and stored in barns from five to ten months. Hay that had been treated with insecticides was subjected to barn dryer treatments. Little loss was noted in the residues of DDT, chlordane and toxaphene, the paper said.

Joseph D. Campbell, Olin Mathieson Chemical Corporation, Baltimore, Md., presented a paper introducing a new plant fungicide, "Omazene." It is used against powdery mildew in roses.

The product has also been found effective against powdery mildew on other crops, but the danger to human beings must be further tested before its use will be allowed on edible crops, he said.

When 0.5 to 0.75 pound of a 50% wettable powder in 100 gallons of water is used as a spray on roses, effective control of powdery mildew results with no appreciable phytotoxicity.

Five scientists of Shell Chemical Development Company prepared a paper on the fate of aldrin and dieldrin in the animal body. The paper indicated that recent toxicological studies show that aldrin is converted rapidly to dieldrin in the animal body. The conversion of aldrin to dieldrin takes place rapidly and is fairly complete. It is assumed to occur in all animals inasmuch as it has been demonstrated in beef and dairy cattle, pigs, sheep, rats and poultry.

Dieldrin, on the other hand, apparently is chemically unchanged in the body and is stored or excreted as such.

## Meeting Set on Use of Antibiotics in Agriculture

WASHINGTON—The first International Conference on the Use of Antibiotics in Agriculture will be held Oct. 19-21 at the Jefferson Memorial Auditorium, U.S. Department of Agriculture.

The conference is being sponsored by the National Academy of Sciences-National Research Council in cooperation with the Agricultural Research Service.





## WORLD REPORT

By **GEORGE E. SWARBRECK**  
Cropplife Canadian and Overseas Editor

Australia and New Zealand may have to import phosphate rock from the U.S. and North Africa unless present fertilizer production planning is altered. This possibility has been voiced by L. J. Stevens, chairman of Dominion Fertilizers, Ltd., a company active in the fertilizer trade in both countries.

Mr. Stevens explained that production methods in the two countries are based on the long term availability of phosphate rock. Consumption is in the region of two million tons a year. The rock comes from three islands in the Pacific Ocean and the increasing demand is straining the production resources.

Under an agreement with the U.K., both Australia and New Zealand take almost the whole of the output though the British can call upon a certain proportion if the need arises. So far, the need has not arisen because the British prefer to take their supplies from North Africa because of the shorter haul. However, in recent months the African asking price has risen considerably and attention has been directed towards taking up the Pacific availability. This would cut back the amounts available to Australia and New Zealand and would make necessary imports from elsewhere.

Both countries have increased their fertilizer usage appreciably in recent years, with New Zealand one of the leaders in aerial application of plant food. The Australian authorities have been encouraging the conversion of sulfuric acid plants from brimstone, which has to be imported, to indigenous pyrites, as part of the self-sufficiency plan.

Effective July 1, 1954, and set to run for five years, the government introduced a bounty plan in order to induce higher pyritic acid output. In a period of one year, little advance has been made because commitments for raw materials are made at least 12 months ahead. However, the prospects for improvement are looked upon as more encouraging.

### Japanese Phosphate

A proposal has been made for the exchange of Japanese phosphate for New Zealand coal, and a development commission is to investigate the proposal.

The first task will be to ascertain the demand for furnace-treated phosphate in deficient districts where the annual rainfall is high and eminently suitable for the water-soluble class of phosphates. If the phosphate is suitable for use then ships delivering it will take back cargoes of coal from New Zealand's west coast.

Japan is rapidly assuming greater importance in the fertilizer business. In the fertilizer year ended July 31, 1955, the Japanese showed increases in both output and exports of ammonium sulfate. The output has been returned at 2,520,000 tons and exports at 520,000 tons, both figures being all time highs for the post-war years.

Sales were made to Formosa, 284,000 tons, Communist China, 80,000 tons, and Korea, 100,000 tons. Smaller amounts went to the Philippines and Thailand. Trade sources report that export prices touched \$60 ton compared with \$57@58 in the previous year.

### Uruguay Tenders Called

The government of Uruguay has asked for the submission of tenders for the erection of a plant for the manufacture of 18-20% superphosphate in powder form with a productive capacity of 20,000 tons a year.

The material should not contain more than 6-8% moisture in the finished product, the specification states.

It is essential, the authorities state, that foreign firms wishing to tender for the construction job, have local representation through whom offers must be made. The closing date is Nov. 25, 1955.

The issuing authority is the Ministerio de Industrias y Trabajo.

### Potash from the Sea

For several years experimenters in Norway have been endeavoring to produce potash from sea water. Last year the research work was extended to Holland and a pilot plant was erected by the Norwegian firm of Norsk Hydro in association with the Dutch firm of Mekog on the Netherlands coast.

Details disclosed indicated that the process was complex and expensive but the two firms maintained their determination to proceed. However, a report from Oslo states that the project has now been abandoned.

### Indian Laboratory

A biological control laboratory is to be established at Bangalore, India, as a result of an aid agreement between the governments of India and Canada. Canada is providing an initial grant of \$38,340. W. F. Sellars, a Canadian expert, is to be in charge of the work in the preliminary stages, his services having been loaned by the Canadian authorities.

The Indian officials feel that while biological control is not as immediately effective as the spraying of pesticides, the plan to use biological methods by introducing the natural enemies of the pests most prevalent has much to commend it.

### Canada's Wild Oats

Research and experimentation on control of Western Canada's most widespread and serious weed, wild oats, will be stepped up in Manitoba during the next 12 months according to H. E. Wood, chairman of the Manitoba Weeds Commission.

Control of the weed, particularly by chemicals, has been studied intensively during the past two years. Results of the study are now being analyzed and will be presented at the Western Canadian Weed Control Conference when it is held in Regina, Saskatchewan, Nov. 29-30.

### North Carolina Pesticide School Dates Set

RALEIGH, N.C.—The eighth annual North Carolina Pesticide School will be held at North Carolina State College here Jan. 10-11. The sessions, which will cover herbicides, fungicides, insecticides and rodenticides, will be under the auspices of the college's School of Agriculture and Extension Division.



**AWARD WINNERS**—With just reason for happiness, these three 4-H club members show their appreciation for \$50 checks awarded to group winners of the 1955 wheat fertilizer demonstration contest of the Oklahoma Plant Food Assn. George Summers (left, president of the association) is congratulating Billy Lee Epperson, Wagoner, Julius Wagner, Glencoe, and Joe Boy Thompson, Reed.

## Oklahoma Group Elects New Officers; Wheat Fertilization Winners Named

STILLWATER, OKLA. — A new slate of officers was elected for the Oklahoma Plant Food Assn. at a recent meeting. The new president is Dick Kenyon, sales representative for Phillips Chemical Co.; vice president is Jim Meggs, sales manager for Nichols Fertilizer; secretary is Parks Yeats, State Department of Agriculture; and treasurer is Dale Campbell, sales representative for Red Star Fertilizer.

During the past year the association has conducted a wheat fertilization contest for Oklahoma 4-H and FFA members. Awards were presented by the association to winners at the annual fall agronomy field day.

In the FFA division the Welch chapter walked off with top honors. Selection of the winner was judged on educational use, percent increase, economy of production, approved practices used and other standards.

The Welch Chapter had an increased wheat yield of 115.5% and an increased profit of \$23.60 per

acre. The chapter received \$100 cash award.

Another FFA chapter, which used 200 lb. 10-20-0 per acre, got a 100% increase and a net profit per acre for the fertilizer of \$14.02.

In the 4-H club division first, second and third went to members from Wagoner, Pawnee and Greer counties respectively.

Here's a typical example: Billy Lee Epperson, Wagoner County 4-Her, ran a 20 acre test. He fertilized acres and got a 22 bu. per acre yield. His average yield on the unfertilized 12 acres was 12.5 bu.

With a complete fertilizer of 150 lb. 10-20-10 at planting time his total production costs on the fertilized field was \$12.75 per acre. This compared to a cost of \$9.75 on the unfertilized plot. Value of the crop was \$41.88 and \$23.75 per acre respectively, making net income from an acre of fertilized wheat a little more than double the profit from the unfertilized plot.

## Plans Set for Seventh Washington Spraying, Dusting Conference

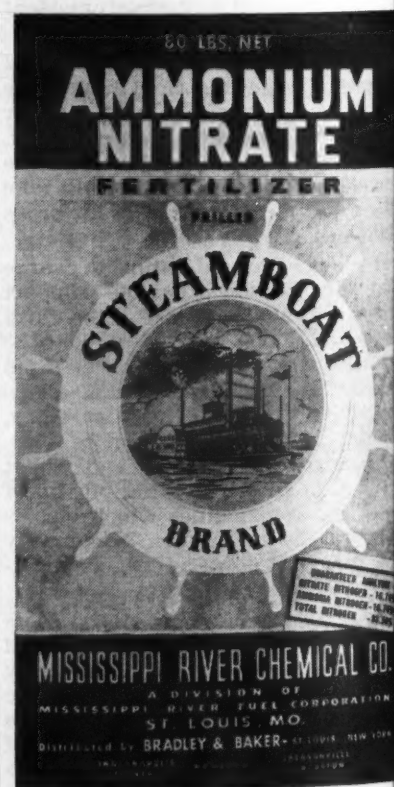
WENATCHEE, WASH. — The seventh annual Washington aerial spraying and dusting conference will be held in the Cascadian Hotel here Oct. 18-19. H. S. Telford, chairman of the Washington State college department of entomology and program chairman, has announced.

The conference is sponsored by the Institute of Agricultural Sciences of WSC and the Washington State Aeronautics commission. The conference is devoted to reports from research workers in the use of agricultural chemicals.

Representatives of the Civil Aeronautics Commission, U.S. Forest Service, aircraft manufacturers and the state college will appear on the program, Dr. Telford said. About half a day will be devoted to demonstrations of aircraft and equipment at one of the Wenatchee airports. Program arrangements are not yet completed.

### Spencer Director

KANSAS CITY — The election of Dr. Franklin D. Murphy, chancellor of the University of Kansas, as a director of Spencer Chemical Co. has been announced by Kenneth A. Spencer, president. Dr. Murphy fills an existing vacancy. He is a director of the First National Bank of Kansas City, Hallmark Cards, Inc., and Security Benefit Life Insurance Co. of Topeka. Dr. Murphy is a member of the board of trustees of Kress Foundation.



**AMMONIUM NITRATE BRAND** Mississippi River Chemical Co., St. Louis, has announced that its ammonium nitrate product will be shipped in bags with the "Steamboat Brand" label as illustrated above. The new \$17 million plant is scheduled to begin production in October according to the company. Sales of the firm's nitrogen products, including NH<sub>3</sub> and solutions, are being handled by Bradley and Baker, New York.



# MEETING MEMOS

pt. 28-30—New England Fertilizer Conference, Poland Spring House, Poland Spring, Maine.

pt. 3-5 — Carolinas-Virginia Pesticide Formulators Assn., Inc., Annual Meeting, Holly Inn, Pinehurst, N.C., J. B. Maddrey, 3111 Broad Creek Road, Norfolk 12, Va., Secretary-Treasurer.

pt. 11—Western Agricultural Chemicals Assn., Annual Meeting, Hotel Claremont, Berkeley, Cal., C. O. Barnard, 2466 Kenwood Ave., San Jose, Cal., Executive Secretary.

pt. 23—South Carolina Plant Food Educational Society, Annual Convention, Columbia Hotel, Columbia, S.C.

pt. 10-12—Association of Official Agricultural Chemists, Annual Meeting, Shoreham Hotel, Washington, D.C., Dr. William Horwitz, Box 540, Benjamin Franklin Station, Washington 4, D.C., Secretary.

pt. 13-14—National Nitrogen Solutions Assn., Meeting and Equipment Display, Illinois State Armory, Springfield, Ill., Roy F. Broyles, Springfield, Ill., Meeting Chairman.

pt. 13-14—Canadian Agricultural Chemicals Assn., Third Annual Meeting, the Chantecleer, Ste-Adele-en-haut, Quebec.

pt. 14—Association of American Fertilizer Control Officials, Annual Meeting, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Drawer 392, Clemson, S.C., Secretary-Treasurer.

pt. 17-18 — Fertilizer Section, National Safety Congress, LaSalle Hotel, Chicago; Thomas J. Clarke, Chairman.

pt. 18-19—Seventh Annual Washington Aerial Spraying and Dusting Conference, Cascadian Hotel, Wenatchee, Wash.

pt. 19-21—International Conference on Use of Antibiotics in Agriculture, Jefferson Memorial Auditorium, U.S. Department of Agriculture, Washington, D.C.

pt. 24—Salesmen's Association of the American Chemical Industry, Fourth Annual Sales Clinic, Roosevelt Hotel, New York.

pt. 27—Middle West Soil Improvement Committee, Annual Meeting, Sherman Hotel, Chicago; Z. H. Beers, Executive Secretary, 228 N. LaSalle St., Chicago, Ill.

pt. 2-3 — Annual Convention, Pacific Northwest Plant Food Assn., Pilot Butte Inn, Bend, Ore.; Leon B. Jackson, 702 Lewis Bldg., Portland, Ore., Secretary.

pt. 2-5—Third annual Mid-Atlantic Farm and Home Show, Convention Hall, Atlantic City, N.J.; William A. Haffert, Jr., Sea Isle City, N.J., executive vice president.

pt. 3-4—Northeastern Division, American Phytopathological Society, Eastern States Farmers Exchange, Inc., 26 Central St., West Springfield, Mass. B. H. Davis, Department of Plant Pathology, Rutgers University, New Brunswick, N.J., secretary.

pt. 4—Fertilizer Section, South Carolina Annual Accident-Prevention Conference, Hotel Francis Marion, Charleston, S.C.; Anton L. Foster, International Minerals & Chemical Corp., General Chairman.

pt. 6-8—California Fertilizer Assn., thirty-second Annual Convention, Hotel Mark Hopkins, San Francisco; Sidney H. Bierly, Executive Secretary and Manager, 475 Huntington Drive, San Marino, Cal.

pt. 8-10—17th Annual New York State Insecticide, Fungicide and Application Equipment Confer-

ences; Bibbins Hall, G.L.F. Exchange, Ithaca, N.Y.; C. E. Palm, Cornell University, Ithaca.

Nov. 29-Dec. 2 — Entomological Society of America, Netherlands Plaza Hotel, Cincinnati.

Dec. 5—Soils & Fertilizer Short Course, Institute of Agriculture, University of Minnesota, St. Paul Campus.

Dec. 5-7—Agricultural Ammonia Institute, Kansas City; Jack F. Criswell, Executive Vice President, Claridge Hotel, Memphis, Tenn.

Dec. 5-7—Chemical Specialties Manufacturers Assn., 42nd Annual Convention, Roosevelt Hotel, New York; H. W. Hamilton, 50 E. 41st St., New York 17, N.Y., Executive Secretary.

Dec. 8-9 — Michigan Fertilizer and Lime Conference, Michigan State College, East Lansing.

Dec. 15-16—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Sponsored by the National Cotton Council.

Dec. 28-30 — American Phytopathological Society, Atlanta, Ga.; Glenn S. Pound, University of Wisconsin, Madison, Wis., Secretary.

## 1956

Jan. 4-6—Weed Society of America, Charter Meeting, Hotel New Yorker, New York; W. C. Shaw, U.S. Department of Agriculture, Beltsville, Md., Secretary-Treasurer.

Jan. 10-11—Eighth Annual North Carolina Pesticide School, North Carolina State College, Raleigh.

Jan. 15-17 — New Mexico Grain & Feed Dealers Assn., Annual Convention, Hilton Hotel, Albuquerque, with Special Portion for Fertilizer and Farm Chemical Dealers; H. B. Henning, Albuquerque, Secretary.

Jan. 16-18—Southern Weed Conference, Ninth Annual Meeting, Hotel Jung, New Orleans; Dr. E. G. Rodgers, Florida Agricultural Experiment Station, Gainesville, Secretary-Treasurer.

Jan. 26-29 — Agricultural Aircraft Assn., Inc., Sixth Annual Convention, Wilton Hotel, Long Beach, Cal.; Wanda Branstetter, Route 3, Box 1077, Sacramento, Cal., Executive Secretary.

Feb. 15-17—California Weed Control Conference, Sacramento and Davis, Cal.; Oliver A. Leonard, Botany Dept., University of California, Davis, Cal., Secretary.

Feb. 15-17 — Western Weed Control Conference, Sacramento and Davis, Cal.; W. C. Robacker, U.S. Department of Agriculture, Nevada Agricultural Experiment Station, Reno, Nev., Secretary-Treasurer.

March 14-18 — National Agricultural Chemicals Assn., Spring Meeting, Hollywood Beach Hotel, Hollywood, Fla., Lea S. Hitchner, NAC Executive Secretary, 1145 19th St. N.W., Washington 6, D.C.

June 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

## BIG APPLE CROP

BURLINGTON, VT.—Vermont apple growers are harvesting one of the largest and best quality apple crops since 1943, C. L. Calahan, horticultural specialist for the Vermont Extension Service reports.

## 75 Years of Grape Research Observed

BERKELEY, CAL. — Seventy-five years of grape research at the University of California and the contribution made by agricultural chemicals to the development of viticulture, were celebrated recently by the Department of Viticulture of the university.

Control of the plant louse was the first pest problem to receive particular attention, around 1895, and the Anaheim wine disease was also studied. An evaluation of rootstocks for resistance to plant lice is continuing to the present day, according to A. J. Winkler, department chairman.

Rootstocks resistant to nematodes have been proven through testing, but a high degree of resistance will result only from a breeding program which is still in progress, University spokesmen say.

Plant growth regulators, with a long history of study, are still being studied. It has been found by the department that 4-chlorophenoxyacetic acid improves the set of seedless varieties and also increases berry size. Benzothiazol-2-oxyacetic acid improves set but has little effect on berry size; maturing is delayed.

Early study also showed that in response to nitrogen fertilization grape yields varied greatly—sometimes increasing 30 to 50%, sometimes being unaffected, and occasionally being actually depressed. Apparently the needs for nitrogen vary greatly. Recently it was found that nitrate content of the leaf petiole at full bloom indicates nitrogen needs: the lower the content the greater the probable response to nitrogen fertilization. Response to potash applications has been limited, and only occasionally has phosphorus stimulated yield.

Viticulture was one of the first agricultural studies made at the University, Dr. Winkler said.

## SNAKICIDE

HOBBS, N.M.—Some of the modern insecticides are not recommended to kill snakes, but a heavy application seems to have done just that. Jim Jackson recently poisoned his cotton, then went back next morning to see if the worms were dead. They were, and along with them there were two dead rattlesnakes lying in the cotton field. Mr. Jackson doesn't know if the insecticides got the snakes or if they died from natural causes. Whatever the reason, the result was pleasing. Several farmers have lost their entire crew of cotton pickers at the sight of a rattlesnake under a cotton stalk.

## Vulcan Expansion

BELLWOOD, ILL. — Vulcan Containers, Inc., has announced an expansion of its storage and warehousing facilities. The new building will be erected adjacent to the enclosed boxcar loading dock erected in 1954. The new addition is designed for adoption of modern materials handling equipment to utilize the entire cubic capacity of the building.

## CSC DIVIDEND

NEW YORK — A dividend of 25¢ per share was declared Aug. 22 on the outstanding common stock of Commercial Solvents Corp., payable Sept. 30, 1955, to stockholders of record at the close of business on Sept. 6, 1955. Previous payment was 25¢ per share on June 30, 1955.

**FEED FERTILIZER**  
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## ANHYDROUS MEETING

(Continued from page 1)

Hansen of Michigan State University.

Dr. Swanson said there are three main reasons why farmers don't adopt a complete fertilizer program. The first is the risk involved. He said they don't apply as much fertilizer as would pay during a normal year, thinking that it won't pay if the weather is poor.

Second reason is the result of inadequate landlord-tenant leases, he said. Most leases in Corn Belt areas, he explained, don't provide adequately for sharing fertilizer cost between landlord and tenant.

Two principles are used in figuring how much nitrogen to use on the farm, according to Dr. Swanson. One, if the "point of most profitable use," at which the return from 10 lb. nitrogen is equal to the cost of 10 lb. nitrogen. This principle applies to farmers who have ample funds for investing in fertilizer, he said.

He said that the amount of nitrogen to apply an acre depends on the level of other practices such as weed and insect control and plant population. When these cultural practices are improved, more nitrogen should be applied to get a bigger profit.

The second principle applies to farmers who are short on ready cash. Dr. Swanson said that instead of adding nitrogen until the last pound pays for itself, they should add nitrogen until it adds the same amount of income that would be earned from putting money into something else.

Dr. Swanson pointed out that the retail price of anhydrous ammonia since last year has dropped from about 10¢ to 7¢ lb., so farmers should find it profitable to use more than before. He said that if corn sells at the same price, they can put on about 20 lb. more an acre than last year.

Louis B. Howard, dean of the College of Agriculture at the University of Illinois, gave the welcoming address at the conference. He told of some of the developments and use of nitrogen fertilizers.

Dean Howard said that it is not known just where in the course of agricultural history that the use of nitrogen fertilizers was started. But as early as 400 B.C., Egyptians utilized camel dung from the Libyan Desert near the temple of their god, "Amon."

"It is supposed that salt like our present 'sal ammoniac' was also produced from this material," he added. "And I presume that the word ammonia itself was derived from the name of the Egyptian god."

Sigurd Melsted said that the plowing down of nitrogen fertilizers is usually recommended when low-protein crop residues are returned to the soil, since nitrogen will increase efficiency of residue conversion into soil organic matter.

He added that nitrate nitrogen in the soil may be used by two systems. It may be absorbed and used by growing plants, or it may be absorbed and used by bacteria in decomposing low-nitrogen crop residues.

Generally, Dr. Melsted said, when crop residues that contain over 1% nitrogen are decomposed by soil bacteria, nitrogen is released for plant growth. But when the crop residues contain less than 1% nitrogen, the soil bacteria will need more nitrogen to carry out decomposition. As a result, the soil bacteria compete with the growing plants for the available nitrogen in the soil.

Dr. Melsted said that except for nitrates, nitrogen fertilizers must be changed by chemical and bacterial action into a form of nitrogen that crop plants can use best—usually the nitrate form.

Similarly, he said, soil organic

matter and crop residues such as straws, legumes and manures that are forms of nitrogen fertilizer in the soil, must be decomposed or altered before nitrogen they hold can be re-used by plants.

Dr. Kurtz told of some of the problems of predicting nitrogen response by soil and tissue testing.

He said that weather is the major difficulty in getting good nitrogen soil tests since the release of nitrates from organic matter may vary from season to season. He added that some people feel that this variation is so great that you could have just as good a nitrogen estimate by checking soil management and cropping history, and forgetting all about the tests.

Speaking of the nitrate tissue test and leaf analysis test, Dr. Kurtz said that if a corn plant is growing in a soil containing a lot of nitrates, they will normally be found by test in the plant tissue.

But, he cautioned that if nitrates are found in the plant in reasonable amounts, you can only be sure the plant is well supplied at that time. Corn plants usually test high in nitrates in early season and then can run low in late July or early August when it's nearly impossible to apply nitrogen fertilizer.

There are other difficulties, Dr. Kurtz added. Nitrogen may test low temporarily during wet periods when nitrate formation in the soil and uptake by the plant are slowed down. The test is also often hard to interpret as the plant approaches maturity.

The leaf analysis can be a good method of diagnosis, Dr. Kurtz said. But the shortcoming of leaf analysis and tissue tests is that the crop is usually nearly grown and all you can do is study your management system so that nitrogen deficiencies don't occur again.

Dr. L. R. Frederick reported that anhydrous ammonia appears to increase the pH in the small application band to values as high as 10. This may slow down nitrification in alkaline soils, he said, but may actually speed it up in acid soils.

If the soil is too dry, he said, no nitrification occurs, and if it is too wet, nitrification stops because of a lack of oxygen.

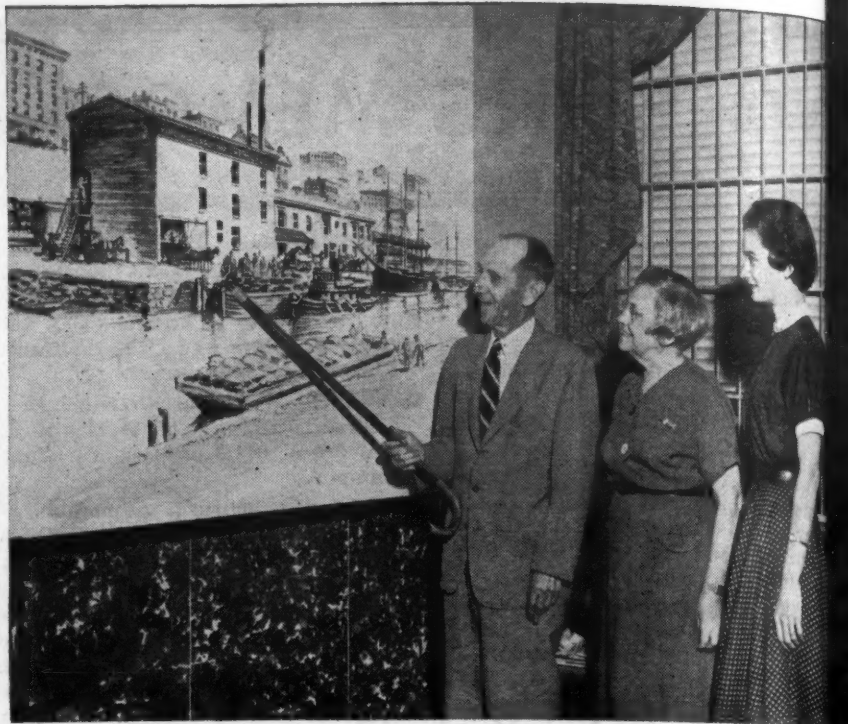
Dr. Michael Peech described the uptake of ammonia by soils. He reported on studies on the effect of pH, organic matter, and moisture on the uptake of ammonia by soils, as well as on total retention capacity.

Prof. C. M. Hansen told the group of the problems in applications of anhydrous ammonia with field equipment. He said that work at Michigan State University is aimed at developing principles for use by the applicator manufacturers in development of their equipment—particularly metering equipment and applicator feet.

He said that they are testing equipment to accurately measure the rate of flow of anhydrous ammonia. They have been able to successfully apply anhydrous ammonia at the desired rates and placement with the equipment that they have developed—particularly plow-down and field applicators.

Session chairmen were Dr. M. B. Russell, head of the University of Illinois Department of Agronomy, and Mark C. Craft, Midwest Fertilizer Co., Springfield, Ill., president of the Agricultural Ammonia Institute.

Jack F. Criswell, executive vice president of the AAI, spoke on "Development of Anhydrous Ammonia as a Nitrogen Fertilizer."



**V-C ANNIVERSARY**—Edward Ryland who joined Virginia-Carolina Chemical Corp. in 1901 stopped by the home office in Richmond to point out features of one of V-C's first plants to Miss Pat Minor, right, a new employee, and Miss Margaret Davenport who has served with the company for 46 years. Ryland, now retired, served as vice president of the corporation which celebrated its sixtieth anniversary Sept. 12.

## Early Days Recalled as Virginia-Carolina Chemical Corp. Notes Sixtieth Anniversary

**RICHMOND, VA.**—Virginia-Carolina Chemical Corp. has just celebrated its sixtieth birthday.

It was in 1895 that Samuel T. Morgan, a leader in the fertilizer industry from Durham, N.C., journeyed to Richmond to see his friend, S. Dabney Crenshaw, another prominent fertilizer manufacturer. From their meeting came the idea to combine the output of several firms for better service to the trade.

After months of negotiation, eight firms from Richmond, Petersburg and Norfolk, Va., and the Durham firm merged to form V-C. Offices were set up in Richmond in the old Haxell-Crenshaw Warehouse, the site of a prison during the War Between the States, and immediately V-C was a going concern.

The early years of V-C history were marked by expansion, and soon the company had factories serving the entire South. V-C's fortunes have been bound closely with the farm economy. The company has shared in the farmer's prosperity and it has suffered with him the hard times of the early twenties and the early thirties.

Since World War II, an expansion

program has brought diversification to the V-C Corporation. Its fertilizer plants and sales offices now serve farmers from the Rocky Mountains to the Atlantic and from Canada to the Gulf of Mexico. V-C has phosphate mining operations in Florida and Tennessee; chemical plants in Florida, South Carolina and Ohio; multiwall paper bag plant in Atlanta and a textile bag plant and headquarters in Richmond. At Taftville, Conn., V-C manufactures "Vical" brand fiber from zein, the protein portion of corn.

## Fertilization, Insect Control Help Produce 3 Bale Cotton Yield

**STANTON, TEXAS**—A yield of three bales of cotton per acre for an area has finally been achieved on W. H. Yater farm. Several farms have made two bales or more, but no one in the area ever harvested three bales to the acre except on small specially treated patches.

This year Mr. Yater is picking three bales per acre from a 20-acre field which was irrigated only three times. He followed a rigid insect control plan, applying insecticides every seven to ten days throughout the growing season.

"This helped the cotton hold fruit," he said, "but I think the secret was an extra application of fertilizer put on the first week in August."

"A neighbor teased me for waiting so late in the season. I wanted to experiment. I put on 13-39-0 just after planting, and after 200 lb. a few weeks later and last 200 lb. in August, which is well later than anyone had ever tried here."

The last application cost him \$20 and is probably responsible for the extra 20 bales of cotton—or a return of almost \$20 for \$1.

## South Carolina Firm

**BENNETTSVILLE, S.C.**—Charles F. Hollis, Inc., here has obtained a state charter to operate fertilizer warehouses and to buy and sell fertilizer and other farm chemicals. Authorized capital stock is \$150,000. Charles F. Hollis is president.

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## 45 Counties in Great Plains Added to Emergency Loan Area

WASHINGTON — Designation of counties in the six Great Plains states of Colorado, Kansas, New Mexico, Oklahoma, Texas and Wyoming as an area where agricultural loans can be made under the expanded credit program of the Farmers Home Administration was announced recently by Ezra Taft Benson, secretary of agriculture.

Credit extended under this program may be used to pay the cost of developing and carrying on the type of farming that provides for the proper use of land in the area.

Many of the loans in the Great Plains credit program are made under emergency loan authorities and are available only in designated areas. The area designated has experienced drought and wind erosion for several years, and credit has previously been available under the regular emergency loan program of the Farmers Home Administration. However, the designations now in effect will expire Dec. 31, 1955. The current action extends the designations for an indefinite period.

Under the Great Plains credit pro-

gram a loan is made only after a land use map has been prepared by the Soil Conservation Service for the farm or ranch to be developed with the proceeds of the loan. Borrowers are required to follow land use and farm management practices recognized locally as best suited for the land on their farms.

Loans are made for the reseeding and establishment of grasslands and other approved conservation and land use practices, including soil and water erosion control measures; development and improvement of domestic irrigation water supplies; repair of existing farm buildings; and when necessary, the purchase of additional land needed to provide an economic unit on a reorganized basis.

Loans may also be made to purchase livestock, farm equipment, seed, fertilizer, feed, insecticides, farm supplies, and for the payment of interest and taxes. In cases when it is necessary to enable the farmer or rancher to continue his operations, loans may include funds to refinance his indebtedness.

New counties designated are:

Colorado—Adams, Arapahoe, Baca, Bent, Boulder, Cheyenne, Crowley, Elbert, El Paso, Huerfano, Kiowa, Kit Carson, Larimer, Las Animas, Lincoln, Morgan, Otero, Prowers, Pueblo, Washington, Weld, Yuma.

Kansas—Barber, Cheyenne, Clark, Comanche, Decatur, Edwards, Finney, Ford, Gove, Grant, Gray, Greeley, Hamilton, Haskell, Hodgman, Kearney, Kiowa, Lane, Logan, Meade, Morton, Ness, Pawnee, Pratt, Rawlins, Rush, Scott, Seward, Sheridan, Sherman, Stafford, Stanton, Stevens, Thomas, Trego, Wallace, Wichita.

New Mexico — Colfax, Curry, De Baca, Guadalupe, Harding, Lea, Mora, Quay, Roosevelt, San Miguel, Torrance, Union.

Oklahoma — Beaver, Beckham, Cimarron, Ellis, Greer, Harmon, Harper, Roger Mills, Texas, Woods, Woodward, Custer, Dewey, Major.

Texas—Andrews, Armstrong, Bailey, Borden, Briscoe, Carson, Castro, Childress, Cochran, Collingsworth, Cottle, Crosby, Dallam, Dawson, Deaf Smith, Dickens, Donley, Fisher, Floyd, Gaines, Garza, Gray, Hale, Hall, Hansford, Hardeman, Hartley, Hemphill, Hockley, Howard, Hutchinson, Kent, King, Lamb, Lipscomb, Lubbock, Lynn, Martin, Mitchell, Moore, Motley, Nolan, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Runnels, Scurry, Sherman, Stonewall, Swisher, Taylor, Terry, Wheeler, Yoakum.

Wyoming — Goshen, Laramie, Platte.

### FHA Loans Reach Record Level in 1955

WASHINGTON — Loans made and insured by the Farmers Home Administration in fiscal 1955 totaled \$293,190,000 and reached the highest level in the agency's history, according to the U.S. Department of Agriculture.

Production and subsistence loans to operators of family-type farms for the purchase of farm equipment, livestock, fertilizer, seed and other farm and home operating expenses totaled \$133,592,000. Soil and water conservation loans totaled \$19,491,000.

### JOHNSON GRASS MENACE

LEXINGTON, KY.—Johnson grass is rapidly becoming a menace throughout Kentucky, according to Joe F. Freeman, agronomist at the University of Kentucky Experiment Station. Thousands of acres of fertile bottomland have been practically taken over, and upland soils are becoming infested with it.

## ICC RULING

(Continued from page 1)

mendations of the President's advisory committee on transportation policy which would provide for the establishment of rates covering train load shipments.

Plant food industry representatives expressed individual company interest in the ICC action, but admitted that in all probability it would touch off some deep controversy between competitive elements in the chemical industry.

An industry spokesman said that two major commodities would appear on the surface to be involved in the ICC ruling. They are phosphatic rock from Texas and potash shipments from New Mexico to the East.

At the present time eastern seaboard consumers of phosphatic rock obtain large shipments through intercoastal waterways from Florida to eastern seaboard points and potash shipments from the Carlsbad, N.M., region move generally by rail to interior mixers and to eastern consumption points.

In the absence of an opportunity to examine the ICC decision—which may be subject to a hearing by the full commission—the spokesman said there may be some virtue in a full train load rate for phosphatic rock from Florida to eastern seaboard points. Large consumers of this commodity buy in large tonnages amounting to as much as 2,000 tons over inter-coastal water movement.

In buying on a train load rate basis, it was pointed out that it would permit eastern consumers to make their buying of the commodity more flexible since they could schedule shipments on a train load rate basis in smaller quantities and if the rate were sufficiently attractive, they would gain thereby in both directions.

Another aspect of the train load rate basis would involve the potash movement from New Mexico east. It was noted that in the past, eastern consumers of potash have attempted to obtain a combination rail-barge rate on shipments of potash from New Mexico through Texan ports and thence by inter-coastal vessels to the East Coast.

In these attempts they have been frustrated by interior mixers who anticipated the effects of such rates on their operations. However, the East Coast industry spokesman said these opponents were unwarrantedly alarmed since the combined rail-barge rate was primarily designed to meet foreign potash import competition.

Trade association officials here were unwilling to comment on the ruling, and potash industry spokesmen said they had not had an opportunity to examine the ruling. On the surface, however, it might appear to open up an avenue whereby potash shipments to the East could gain train load rates.

It was pointed out that in the past when import competition became acute the potash industry had requested train load rates from New Mexico east, but at that time the ICC looked very narrowly on such proposals.

While the three man commission action is still subject to suspension action and further hearing by the full commission after objection by interested parties, on the surface it would appear to be a break in the heretofore unbending attitude of the ICC.

### SOIL TREATMENT PAYS

URBANA, ILL. — Average wheat yield on 20 University of Illinois soil experiment fields was about 25 bu. without soil treatment and 46 with treatment and crop rotation.

## Hot Weather Helps Cotton, Hurts Other Crops in Mid-South

MEMPHIS — Cotton picking time has returned to the Mid-South.

Extension agents in Arkansas, Mississippi, Missouri and Tennessee reported the gathering of the crop has begun in thousands of fields in the Mid-South and that there will be a steady flow of the white gold to the gins in coming weeks.

The recent hot weather caused cotton to open a little farther than was anticipated, and the fields are ready for the thousands of pickers and for some of the mechanical pickers.

Schools are out, too, for the picking season in many of the big cotton producing areas of the Mid-South.

While cotton is benefiting from the hot weather, other crops are suffering and the weather is beginning to take its toll in Arkansas.

The Arkansas Agricultural Extension Service reported dry weather has further reduced the soybean crop, is retarding the seeding of fall grains and that late corn yields will not be as good as the early corn crop because of the lack of sufficient rainfall late this summer.

The situation contrasts with the spring and early summer when most sections of the state received plenty of rain.

Rice harvesting was getting under way in a few counties of Arkansas.

In Southeast Missouri general picking of one of the Pemiscot County's largest and finest cotton crops now is in full swing, agricultural extension officials said.

"The cotton is turning out to be very good quality—and gins are running at full steam," W. F. James, Pemiscot County agent, said.

Farming activity in Mississippi generally moved at an increased tempo during the past week, according to the Mississippi Agricultural Extension Service.

Cotton picking headed the list of "do-it-now" jobs confronting Mississippi farmers. Corn and soybeans are being harvested by many farmers, silos are being filled with record-breaking sorghum crops, and winter grazing crops are being planted on prepared seedbeds, the extension service reported.

A. G. Bennett, extension entomologist, reported some armyworms are attacking young oats and wheat.

He also said late planted cotton and irrigated cotton still are being protected from boll weevil damage.

### New Use Seen For Salty Land

EL PASO, TEXAS—There may be a new use for many of the salted out fields in the Rio Grande Valley, according to Don Longnecker, superintendent of the Ysleta Experiment Station. He says farmers can sod these fields to bermuda and derive excellent grazing from them. The only requirement besides water will be application of nitrogen fertilizer.

Several thousand acres have become too salty for alfalfa and cotton, because the irrigation waters coming from the wells have a high salt content. The river water is not salty, but farmers got only 4.5 inches of it this year. Most of the irrigation was done by wells.

### BIGGER WHEAT YIELDS

LINCOLN, NEB. — A Nebraska soils specialist reports that wheat yields increased more than 12 bu. per acre in 1955 tests, where nitrogen and phosphate fertilizers were added according to soil tests. M. D. Weldon, of the University of Nebraska's extension staff, says those extra bushels returned a net profit of \$13.16 per acre, after paying all the costs of the fertilizer.

## MERGER

(Continued from page 1)

88 shares of Stauffer common stock will be issued in exchange for 214,781 shares of the Consolidated Class A stock. There are presently outstanding 2,350,240 shares of Stauffer common stock.

Mr. de Guigne also announced that the Stauffer board Sept. 19 increased the quarterly dividend payable on the Stauffer common to 40¢ a share, payable Dec. 1 to stockholders of record November 17th. It is hoped that the merger will become effective and the new stock will be issued before record date.

Total assets of the combined companies will be \$120 million. The Consolidated Chemical Industries operations will be carried on under the name of "Consolidated Chemical Industries Division of Stauffer Chemical Co." No significant changes affecting personnel in either company are contemplated.

Stauffer, which holds all of the Class B voting stock of Consolidated, is a prime mover in the formation many years ago of the predecessor companies of Consolidated.

## INDIA PLANT

(Continued from page 1)

power with 20,000 k.w. capacity.

Also required are an air liquefaction nitrogen plant for two million cubic feet of nitrogen a day; an ammonia synthesis plant producing 40 long tons a day using 50 atmospheres pressure comprising (a) compressors (b) converter (c) refrigeration equipment and (d) ammonia storage, vessels, etc.

A contact sulfuric acid plant, producing 160 long tons a day; a phosphoric acid plant, with an output of 10 long tons of 30% P<sub>2</sub>O<sub>5</sub> a day; an ammonium phosphate plant producing 50 long tons of 16/20 N-P mixture; an ammonium sulfate plant, with a capacity of 75 long tons a day consisting of a crystallizer using ammonia and sulfuric acid, together with driers, and an ammoniated superphosphate plant complete the list of requirements.

Further details may be obtained from the firm which should be addressed at Udyogamandal P. O., Bangalore, Cochin State, South India.



# Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Western states.

## VIEWPOINT

### Bug Resistance Adds to Residue Problem

That many questions still remain to be answered in the complex problem of insect control is somewhat of an understatement to many whose business futures are at stake in the outcome of events.

Insect resistance, with the necessity of increasing dosages; the possibility of excessive residues on plants at harvest time; the setting of tolerances on many pesticides not yet tested; and the need for field evaluation of new materials, all tend to lump themselves into one very tough problem.

The recent meeting of the National Agricultural Chemicals Association brought out some of the points of consideration in this regard. Dr. Charles E. Palm, head of the department of entomology at Cornell University and past president of the Entomological Society of America, outlined the situation very well in his talk before this group.

He recalled some of the recent history of the industry, emphasizing the changes that were brought about with the rapid introduction of new toxicants and the change in attitude of so many of the growers who showed an eagerness to use new bug-killers. "Extension men were asked not for recommendations, but for directions or experience with a given insecticide, since the grower already had made up his mind to use it," Dr. Palm said.

Thus, the important role of the dealer in this picture is underlined. As Dr. Palm says, "The dealer is still a most important man in aiding farmers with selection and use of pesticides." We should like to reemphasize this statement by reminding that the dealer is the last man to talk to the user of pesticides at the point of purchase. This is an important link.

It must be kept constantly in mind, of course, that the problem of residues on crops at harvest time is a matter of particular consideration. This bears especially heavily on those who must make recommendations for 1956 crops, since only those pesticides for which tolerances have been established, or those exempted from the need for a tolerance, can be given the green light with safety.

Dr. Palm, in commenting on this phase of the picture and hitting also on other questions which face the trade, observes that before much progress can be made toward indicating the dosages for pesticidal application, one must have information on the amount of residues that the grower will have at harvest time, after he has completed his spray schedule. It is the harvested crop that the Food and Drug Administration will sample for possible residues.

Complications arise from seasonal weather conditions which vary from year to year and often infestations hit severely, or start early and continue until the crop is ready to be harvested. In such cases, may the grower make an additional application of pesticide and still remain within safe residue limits? Answers to this and similar questions are being worked out at the present time and will be forthcoming as rapidly as possible.

Resistance on the part of insects to recommended chemicals is another source of difficulty to the grower. When this happens, the recommended dosages become ineffective, large infestations of bugs build up, and the grower naturally demands a more effective pesticide so the crop may be saved.

Even if other materials are known to be effective

and are available, they cannot be recommended for a crop if no tolerance is established or registration granted. The farmer has no desire to experiment on his own, for such an act is fraught with many hazards when it comes to risking excessive residues.

Dr. Palm expresses the feelings of many, no doubt, when he says, "It is a frustrating situation when research knows some pesticidally effective chemicals, but lacks sufficient data on residues to get tolerances established and registration granted. I feel that the current study of trying to group related crops in terms of residue loads, type of growth, use of edible parts, etc., will aid us in the future to get faster release of effective pesticides under such situations."

"For many years, workers in the state agricultural experiment stations have conducted cooperative experiments with interested growers. This procedure has been the backbone of the development of pest control practices. Today we face the consideration with new pesticides, as to whether they may be used on food crops for experimental purposes if residues remain at harvest, unless the experimenter has control over the disposition of the crop. If a tolerance is established, or an experimental tolerance has been granted, sufficient background is available to go ahead."

"We hate to retard development of new pesticides, because we need them. Insect resistance to chemicals is prodding us on this point every day. Industry is faced with tremendous cost outlays in development which are a very real consideration in how far they can go in new product research without rather definite information as to its probable usefulness and market demand. I wish that I could answer this complex problem. It needs prompt and careful attention to prevent any lag in research programs."

"The question of how much, or how little, residue research must be done by the experiment stations is a live issue. I venture to say that all stations should have data on residues for agricultural pesticides that they are recommending within their state. We need to know what residues are under the growing conditions for which the pesticides are recommended."

"Possibly the pooling of information by all of the states within the region will be of benefit. State and federal support for residue research is as imperative as similar support for biological evaluation of the chemicals."

"Fortunately during the past several years, the members of the agricultural chemical industries have supported, through grants, residue research at a number of the experiment stations, as the programs related to their products. Further, they have accepted for analysis, samples from plots treated by state and federal workers. Without this assistance, we would be in bad shape today, and without a continuation of the close liaison, we cannot make the most of our future research effort."

Dr. Palm, we think, has summarized the situation very well. There is of course no single solution to a problem so complex, but with the continuing cooperation of the Food and Drug Administration, the U.S. Department of Agriculture, the industry and the Land Grant Colleges, the remaining hurdles can be cleared.

If there should be any one solution, it will be just that: cooperation by all concerned.



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### Texas Fertilizer Sales Show Slight Gain First Six Months

COLLEGE STATION, TEXAS — Sales of all fertilizers throughout Texas January 1-June 30, inclusive, totaled 375,177 tons against 374,308 tons during the first six months of 1954.

According to Dr. J. F. Fudge, state chemist, this "very slight increase is due mainly to enlarged sales of materials—from 154,197 tons in 1954 to 167,341 this year." At the same time tonnage of mixed goods dropped below that of last year, or 207,66 tons this year and 220,111 tons in the first six months of 1954. Notwithstanding, these totals represent, respectively, 55% of the total tonnage sold the past spring and 59% in the same period one year ago.

Indicating trends, Dr. Fudge says that the 1955 sales of the 5-10-5 grade (93,544 tons) were about 25,000 tons lower than five years ago, while more than 37,000 tons of higher analysis grades of the 1-2-1 ratio were sold this year compared with only 14,000 tons five years ago.

"Over a five-year period sales of the 10-10-10 and higher grades of the 1-1 ratio have increased greatly," the state chemist observes. "Stated another way, the 130,904 tons of

goods of the 1-2-1 ratio contained plant food equivalent to 169,142 tons of 5-10-5. The 8,116 tons of grades of the 1-1-0 contained plant food equivalent to 11,385 tons of 10-10-0. These data emphasized the strong trend toward use of fertilizers of higher analyses."

Commenting on regional distribution, Dr. Fudge says that East Texas absorbed more than one-half of the total tonnage of mixed goods sold in the state. East Texas, Gulf Coast and North Central Texas combined used 83% of the mixed goods.

Moreover, East Texas used more than one half of the ammonium nitrate bought throughout the state; Gulf Coast region about one third of the ammonium sulphate and one half of the unacidulated phosphate and ammonium phosphates; and West Texas used more than one half of the anhydrous ammonia and normal superphosphate.

### Turf Conference

STATE COLLEGE, N.M.—A state-wide turfgrass conference will be held at New Mexico A&M College Oct. 6-7, according to John C. Overpeck, head of the college's agronomy department. Authorities on the subject of lawns will take part in the program.

### BIG BUSINESS

BATON ROUGE—As a source of cash income to farmers in Louisiana, sweet potatoes rank first among all fruits and vegetables and sixth among all farm enterprises. During the past five years Louisiana farmers have received an average of almost 13 million dollars annually from the sale of sweet potatoes.

### St. Regis Takes Over General Container

NEW YORK—St. Regis Paper Co. announces that it has acquired more than 95% of the outstanding capital stock of General Container Corp. of Cleveland, Ohio, as a result of an offer of exchange by St. Regis and which was declared effective as of Aug. 25, 1955. Under the terms of the offer, the holders of General's capital stock will receive 2% shares of St. Regis common for each share of General.

General Container, whose principal offices are in Cleveland, had sales in 1954 in excess of \$23,000,000. At the end of 1954, General had 134,656 shares of common stock outstanding with no preferred stock or bonds.

General is engaged in the manufacture of corrugated fibre shipping containers and allied products, folding cartons and set up boxes, and corrugating medium and container chipboard.

The products manufactured by General are produced at plants at the following locations: Cohoes, N.Y.; Canton, Ohio; Cleveland, Ohio; Dubuque, Iowa; Coshocton, Ohio; Buffalo, N.Y., and Marshall, Mich.

The entire General organization will remain unchanged and management continued as in the past with Dan L. Pickering, chairman of the board, and Robert W. Agler, president.

### SPECIALIST NAMED

ST. PAUL—Hal Route, Worthington, fieldman for the Southwest Farm Management Service, has been appointed extension farm management specialist at the University of Minnesota.

## Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$0 per column inch. All Want Ads cash with order.

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- Formulators of Pesticides, Herbicides and other Farm Chemicals
- Retail Dealers selling fertilizer, farm chemicals and other farm supplies; Custom Sprayers, Pest Control Operators, and Nurserymen
- Farm Advisor Group—county agents, agriculture department officials, extension and experiment station personnel, soil conservation men, bankers and consultants

Croplife, with a publishing schedule every 168 hours, is reporting news to the industry while it's still news! A staff of 21 crack newsmen in key U.S. cities and backed by 100 special correspondents provides the stop-press coverage of the industry required by readers who make the command decisions.

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